

# ***ANNUAL REPORT***

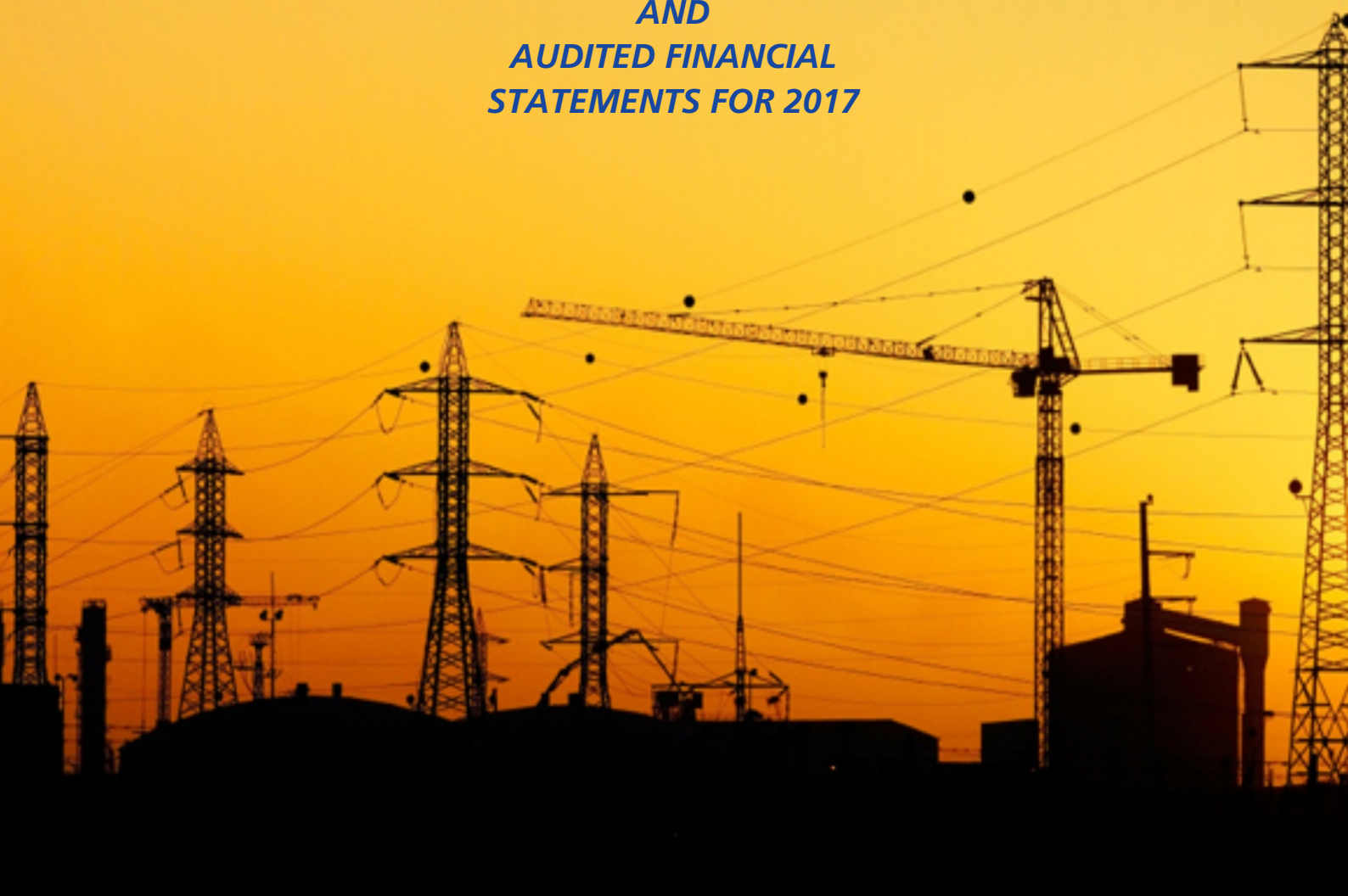
AND AUDITED  
FINANCIAL  
STATEMENTS

FOR 2017 



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and

*Audited Financial Statements for the Year ended  
31 December, 2017*

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# TABLE OF CONTENTS

- **CHAIRMAN'S REMARKS**
  
- 1.0 THE COMMISSION**
  
- **ACTIVITIES**
  
- 2.0 TECHNICAL REGULATION**
  - 3.0 Strategic Planning And Policy
  - 4.0 Renewable Energy Promotion
  - 5.0 Energy Efficiency Promotion & Climate Change
  - 6.0 Social, Environmental Impact And Technology Assessment
  - 7.0 Human Resource Development
  - 8.0 Public Affairs
  
- **APPENDICES**
  - 9.0 AUDITED FINANCIAL STATEMENTS FOR 2016**

# ***CHAIRMAN'S REMARKS***





 *Dr. Kwame Ampofo*  
**CHAIRMAN**

# CHAIRMAN'S REMARKS

The growth of the Ghanaian economy has been unmistakable, even if there have been challenges. The energy sector has borne the burden of the low fall outs of this growth because energy is an indispensable resource for development. The industry, its institutions and manpower have had to grapple with difficulties that is the product of the aspirations of industrial growth and the inadequate technological and financial resources available. The Energy Commission has remained committed to its mandate under law to develop and elaborate national policies and strategies for harnessing all energy resources and technologies to drive the growth of the energy sector in Ghana.

Development does not take place in a vacuum. Data is one key ingredient that provides both the foundation and the needed light ahead of that process. In 2017 the Ghana Energy Access (GhEA) Toolkit, a geospatial information system (GIS), web-enabled energy database and interactive platform was

updated with 2016 energy data, while the Toolkit itself was made more user-friendly. The Commission updated the Energy Outlook for 2017 and churned out the National Energy Statistics, as well as the 2<sup>nd</sup> edition of the pocket-sized Key Ghana Energy Statistics publication. The planning period for the Strategic National Energy Plan (SNEP) was varied from 2006-2020 to 2018-2030 in line with the aspirations of the Sustainable Development Goals (SDGs) and to reflect government programmes including the Planting for Food and Jobs; One District- One Factory Initiative; as well as the Commission's own pending interventions such as the Drive Electric Initiative.

As a Regulator, implementation and enforcement of regulations flow naturally from the legal duties of the Commission. On the supply front of the electricity industry, the Commission certified 1,557 electrical wiring professionals (CEWPs) and 66 electrical wiring inspectors (CEWIs) to undertake safe wiring in the country. The Commission also launched an android mobile application, the Electrical Wiring Programme (EWP) App, for electrical wiring operators and made it available on Google Play Store to enable property owners and developers to identify and engage certified electricians and inspectors within

their localities. The Commission also developed a Code of Practice as required under the Power Sector Reform to guide the establishment of the Wholesale Electricity Market (WEM). The much awaited Electricity Market Oversight Panel (EMOP) was established in compliance with the Electricity Regulations 2008, (L.I. 1937) to supervise the operation and administration of the WEM.

In response to the incessant calls for street lights and the challenges to do with the management of the few available, the Energy Commission developed draft regulations for public lighting to provide a legal framework for the enforcement of standards for public lighting developed by the Ghana Standard Authority (GSA).

After 20 years of the passage of its enabling Act, the Energy Commission Act, 1997 (Act 541), the Commission finds itself lifted from the pages of its regulations into the streets, homes, businesses and industries of the stakeholders on account of whom those regulations were crafted. During the year 2017, the Commission performed social, environmental, impact and technology assessment visits of natural gas facilities and undertook inspections of Electricity Company of Ghana (ECG) and the Northern Electricity Distribution Company (NEDCo) meters across the Eastern and Western Regions. Officials of the Commission paid visits to the facilities of newly licensed entrants to the renewable energy industry and to the Tema and Takoradi Ports to ensure compliance with energy efficiency regulations on the importation of used refrigerators.

Ghana has a universal access to electricity target of 2020. In an effort to overcome the energy access expansion challenges, the renewable energy front is one the Energy Commission has pushed over the years. The Rooftop Solar Programme was launched in 2016 to reduce demand on the grid. As a result, the Commission provided solar PV systems of 500 Wp capacity to 200 rural household in 16 off-grid communities. A collaboration with afb Ghana Limited, a financial services institution yielded a solar credit facility to help prospective applicants to the Programme acquire balance of system

components (BoS). Two hundred and fifty (250) technicians were trained in the design, installation and maintenance of solar PV systems with partial funding from the Skills Development Fund (SDF).

The Ghana Renewable Energy Fair (Conference and exhibition) continues to remain a platform for renewable energy industry practitioners to deliberate on strategies at promoting the sustainable development of renewable energy sources. The 4<sup>th</sup> RE Fair was held successfully.

In 2017, the Commission employed public awareness campaigns and a mandatory appliance standards and labelling regime to promote energy efficiency and productive uses of electricity, natural gas and petroleum products. A database on energy efficient regulators as well as a web application of efficient refrigerating appliances was developed to enable consumers verify whether refrigerating appliances met the minimum energy efficiency standards set by the Commission before purchase.

The energy sector in Ghana has come a long way and still has some way to arrive. The Energy Commission as a technical regulator will continue to employ international standards and best practices, institutional stakeholder involvement, building the capacity of its staff and strengthening internal structures to overcome those challenges on the path to achieving viable sub-sectors.



# TABLE OF CONTENTS

THE COMMISSION .....	9
Introduction .....	9
Governing Board.....	9
Object and Functions .....	10
Structure .....	10
Technical Regulation Directorate.....	11
Renewable Energy Directorate .....	11
Energy Efficiency Promotion and Climate Change Division .....	11
Strategic Planning and Policy Directorate .....	11
Social, Environmental Impact & Technology Assessment Directorate .....	11
Finance, Human Resource and Administration Directorate.....	11
Other Units.....	12
Technical Committee.....	13
Our Mission .....	14
Our Vision .....	14
TECHNICAL REGULATION .....	15
Energy Efficiency and Climate Change (EECC).....	22
STRATEGIC PLANNING AND POLICY .....	23
SOCIAL, ENVIRONMENTAL IMPACT AND TECHNOLOGY ASSESSMENT .....	25
INSPECTION AND ENFORCEMENT .....	27
RENEWABLE ENERGY PROMOTION .....	31
1. NATIONAL ROOFTOP SOLAR PROGRAMME.....	31
2. ANNUAL RENEWABLE ENERGY FAIR.....	33
3. MAPPING OUT RENEWABLE ENERGY GRID INTEGRATION PROJECT (MOREGIP).....	35
4. DEVELOPMENT OF REGULATION FOR THE WOODFUEL INDUSTRY IN GHANA.....	35
5. DEVELOPMENT OF STANDARDS AND LABELLING SCHEME FOR THE IMPROVED COOKSTOVE MARKET.....	36
6. IMPLEMENTATION OF SUSTAINABLE ENERGY FOR ALL (SEFORALL) INITIATIVE.....	37
7. LICENSING OF RENEWABLE ENERGY SERVICE PROVIDERS.....	38
8. WHOLESALE ELECTRICITY SUPPLY LICENCES.....	39
9. IMPORTATION, INSTALLATION AND MAINTENANCE LICENCES.....	40
10. RENEWABLE ENERGY MASTER PLAN (REMP).....	40
11. CHINA-GHANA RENEWABLE ENERGY TECHNOLOGY TRANSFER (RETT) PROJECT.....	40
Human Resource Development and Administration .....	43
PUBLIC Engagment and Education .....	45



## THE COMMISSION

### Introduction

The Energy Commission Act, 1997 (Act 541) mandates the Commission to regulate, manage and coordinate the efficient development and utilization of energy resources in Ghana. It also provides for the granting of licenses for the transmission, wholesale supply, distribution and sale of electricity and natural gas. With the coming into force of the Renewable Energy Act, 2011 (Act 823), the Energy Commission received the extended responsibility of harnessing the available renewable energy resources in the country and promoting the deployment of renewable energy technologies to enhance energy supply in Ghana. The Commission's Act 541 was also amended by the passage of the Energy Commission (Amendment) Act, 2016 (Act 933) to provide for local content and local participation in the electricity supply industry (ESI) and for related matters. In December 2017, the operationalising legislative instrument for Act 933, the Energy Commission (Local Content and Local Participation) (Electricity Supply Industry) Regulations, 2017 (L.I. 2354) entered into force. The objective of the regulations among other things is to achieve a minimum of 51% equity participation and 60% local content in wholesale supply and distribution in the ESI in Ghana and also to develop capacity in the industry for the manufacture of electrical equipment, electrical appliances and renewable energy equipment.

### Governing Board

The Governing Board of the Energy Commission consists of seven members appointed by the President of Ghana acting in consultation with the Council of State of the Republic. In making the appointments, the President takes into consideration the knowledge, expertise and experience of the persons so appointed and in particular, their knowledge in matters relevant to the functions of the Commission.

The Executive Secretary is responsible for the day-to-day administration of the Energy Commission and is required to ensure the implementation of the decisions of the Board.

In 2017 the composition of the Commission was as follows:

1. Prof. George Panyin Hagan  
Chairman
2. Kpembewura Banbange Ndefoso  
(IV) Member
3. Dr. Isaac Frimpong Mensa-Bonsu  
Member
4. Moses Aristophanes Kwame Gyasi  
Member
5. Hon. Nana Akua Owusu Afriyieh  
Member
6. Alhaji Jabaru Abukari  
Member
7. Dr. Alfred Kwabena Ofosu Ahenkorah  
Member/Executive Secretary

## Object and Functions

The Commission is required by law to regulate, manage the utilization of energy resources, and provide the legal, regulatory and supervisory framework for all energy service providers in the country. Specifically, the Commission is to grant licenses for the wholesale supply, transmission, distribution and sale of electricity and natural gas, and for the promotion of renewable energy technologies and services.

The critical statutory mandates of the Energy Commission include the following:

- (a) To recommend national policies for the development and utilization of indigenous energy resources;
- (b) To advise the Minister on national policies for the efficient, economical, and safe supply of electricity, natural gas, and petroleum products having due regard to the national economy;
- (c) To prepare, review and update periodically indicative national plans to ensure that all reasonable demands for energy are met;
- (d) To secure a comprehensive data base for national decision making on the extent of development and utilization of energy resources available to the nation;
- (e) To receive and assess applications, and grant licenses under Act 541 to public utilities for the wholesale supply, transmission, distribution and sale of electricity and natural gas;
- (f) To establish and enforce, in consultation with the Public Utilities Regulatory Commission, standards of performance for public utilities engaged in the, wholesale supply, transmission, distribution and sale of electricity and natural gas;
- (g) To promote and ensure uniform rules of practice for the wholesale supply, transmission, distribution and sale of electricity and natural gas;
- (h) To pursue and ensure strict compliance with Act 541 and regulations made under it; and
- (i) To perform any other function assigned to it under the Act or any other enactment.

Under the Renewable Energy Act, 2011 (Act 832) the Energy Commission is to:

- (a) advise the Minister on renewable energy matters;
- (b) create a platform for collaboration between the government and the private sector and civil society for the promotion of energy sources;
- (c) recommend and advise relevant stakeholders on the educational curriculum on the efficient use of renewable energy sources and to evolve programmes for its mainstreaming in educational institutions;
- (d) recommend for exemptions from customs, levies and other duties, equipment and machinery necessary for the development, production and utilization of renewable energy resources;
- (e) in consultation with the Public Utilities Regulatory Commission recommend financial incentives necessary for the development, production and utilization of renewable energy sources;
- (f) promote the local manufacture of components to facilitate the rapid growth of renewable energy resource;
- (g) Promote plans for training and supporting local experts in the field of renewable energy;
- (h) promote the benefits of renewable energy to facilitate its utilization;
- (i) in consultation with relevant stakeholders set targets for the development and utilization of renewable energy resources; and
- (j) implement the provisions of the Act.

Section 2 of the Energy Commission (Amendment) Act, 2016 (Act 933) mandates the Commission to promote local content and local participation in the supply, transmission, distribution and sale of electricity and natural gas and the provision of allied services to support national development.

## STRUCTURE

Following the enactment of the Renewable Energy Act, 2011 (Act 823), the activities of the Commission have been restructured under seven (7) Directorates as follows:

## Technical Regulation Directorate

The Technical Regulation Directorate is responsible for matters relating to the supply, transmission and distribution of electricity and natural gas. This includes licensing of service providers, elaboration of regulations, codes of practice, guidelines and procedures for electricity and natural gas supply and distribution. The Directorate is also responsible for the regulation and licensing of all midstream and downstream operations of natural gas such as gas processing, LNG re-gasification, natural gas imports, gas pipeline transportation and gas distribution and consumption.

### Renewable Energy Directorate

The Renewable Energy and Energy Efficiency Promotion Directorate comprises the following:

- (a) Office of Renewable Energy Promotion
- (b) Office of Energy Efficiency Promotion

### Energy Efficiency Promotion and Climate Change Division

The Energy Efficiency and Climate Change Division of the Energy Commission has responsibility for matters relating to the promotion of efficient use of energy resources and promoting programmes for the promotion of Climate Change Mitigation and adaptation in Ghana as part of the regulatory and promotional functions of the Energy Commission as mandated by the Energy Commission Act, 1997 (Act 541).

### Strategic Planning and Policy Directorate

The responsibilities of the Strategic Planning and Policy Directorate (SPPD) are to:

- (a) prepare indicative energy plans;
- (b) recommend policies to ensure all demands for energy are met in an efficient and sustainable manner;
- (c) formulate national policies for the development and utilization of indigenous energy resources;
- (d) review energy policies and prepare Energy Policy Briefs;
- (e) prepare Annual and Medium-term Energy Outlooks and Annual National

- (f) Energy Statistics for Ghana; and manage the National Energy Data Processing and Information Centre (NEDPIC) at the Commission.

### Social, Environmental Impact & Technology Assessment Directorate

The Social, Environmental Impact and Technology Assessment (SEITA) Directorate is responsible for the following:

- (a) conducting environmental impact assessments of all national energy plans, programmes and projects;
- (b) preparing and monitoring guidelines to ensure that environmental and social issues are incorporated into the development and implementation of energy projects;
- (c) conducting and reporting on the assessment of energy technologies and making recommendations regarding their use in Ghana; and
- (d) preparing environmental and technology policy review papers for the Commission.

### Finance, Human Resource and Administration Directorate

The Directorate is made up of the following:

- (a) Finance Division;
- (b) Human Resource and Administration Division; and
- (c) Public Affairs Unit

The Directorate is responsible for ensuring that the Commission maintains the needed financial and human resource capacity required to effectively and efficiently plan and regulate the energy sector.

The specific tasks of this Directorate include the following:

- (a) develop and implement systems and procedures for the efficient and effective delivery of general administrative services of the Commission;
- (b) develop a human resource plan to provide the requisite skill levels to meet

- the Energy Commission's mission and objectives;
  - © develop and implement staff performance appraisal and incentive systems;
  - (d) develop financial policies and procedures for planning and controlling the financial transactions of the Commission consistent with prevailing financial and accounting policies;
  - (e) coordinate and prepare annual budgets of the Commission;
  - (f) consolidate and incorporate the Commission's need for equipment and materials into an overall plan and ensure prompt release of funds to meet all approved purchases;
  - (g) oversee the preparation of the Commission's financial encumbrances, impact account vouchers, capital expenditure ledgers, balancing of vote service ledgers and local purchase orders (LPOs); and
  - (h) Ensure that the Energy Commission is constantly in touch with the public by maintaining healthy relations with the Ghanaian Media and other energy sector stakeholders.
- iv. maintain an accurate Register of licenses; and
  - v. follow up on inspection reports and where necessary take appropriate legal action against defaulting service providers.

#### **b) Internal Audit Unit**

The Internal Audit Unit reviews governance, assesses risks and controls of all technical operations, administration and financial activities necessary to achieve the functions and objectives of the Commission. It also provides assurance and services designed to add value and improve the operations of the Commission.

#### **c) Procurement Unit**

The objective of the unit is to procure all goods, works and services in accordance with the Public Procurement Law 2003, (Act 663), (Amendment) Act 2016, (Act 914) and other international procurement procedures. As provided under section 15 sub section 8 of the Public Procurement Law 2003, (Act 663), (Amendment) Act 2016, (Act 914) every Entity shall establish a Procurement Unit to undertake all activities related to procurement within the Entity. In compliance with this Act the Energy Commission established the Procurement Unit in the year 2006 to undertake and co-ordinate all procurement activities within the Commission. Against this backdrop the Unit is required to coordinate all the Commission's procurement activities into yearly Procurement Plans for budget estimates and to ensure that all procurements are conducted in accordance with the law. The Unit aims to mainstream all procurement activities within the Commission and to ensure value for money.

#### **d) Electricity Market Oversight Panel (EMOP) Secretariat**

The EMOP Secretariat is the administrative office of the Electricity Market Oversight Panel and implements the decisions taken by the Panel.

Regulation 16 of the Electricity Regulations 2008, (L.I. 1937) mandates the Energy Commission to establish the EMOP to supervise

### **Other Units**

#### **The Commission has other special units, which are:**

- (a) Legal Unit;
- (b) Internal Audit Unit;
- (c) Procurement Unit; and
- (d) EMOP Secretariat.

#### **a) Legal Unit**

##### **The Legal Unit is required to:**

- i. make appropriate legal recommendations relating to the efficiency and effectiveness of established regulatory frameworks and strategies;
- ii. serve as the Board Secretariat and in that regard, advise Members of the Board on all legal matters;
- iii. represent the Commission on all legal matters;

the operation and administration of the Wholesale Electricity Market (WEM) and to carry out its functions independent of the Transmission Utility (GRIDCo).

The EMOP Secretariat was therefore established to coordinate the following functions of the Panel:

- (a) monitor the general performance of the market administration functions of the Transmission Utility;
- (b) ensure the smooth operation of the Wholesale Electricity Market;
- (c) review the operations of the Wholesale Electricity Market and studies related to the development of the market,
- (d) review procedures, manuals and electricity market rules for the operation of the Wholesale Electricity Market,
- (e) monitor pre-dispatch schedules,
- (f) resolve disputes referred to it by market participants in respect of transactions in the Wholesale Electricity Market,
- (g) ensure the effective and consistent application by the Transmission Utility of the rules and standards of the Wholesale Electricity Market,
- (h) ensure the long-term optimization of hydro-electricity supply sources in the country,
- (i) make appropriate recommendations to the Commission in respect of the Panel's functions, and
- (j) perform any other function conferred on it by the Commission.

Although Members of the Electricity Market Oversight Panel have not been inaugurated and therefore the Panel not operational, the Secretariat was established to make the necessary arrangements and prepare documents in readiness for the Panel. The Secretariat was mainly tasked to conduct researches on activities of the wholesale electricity market and produce reports to serve as a source of information for stakeholders and market participants. This gave rise to the birth of the Ghana Wholesale Electricity Market Bulletin, a monthly publication produced by the Secretariat.

## Technical Committee

The Technical Committee is an establishment under section 29 of the Energy Commission Act, 1997 (Act 541).

The Technical Committee as established, is mandated in accordance with Section 28 of the Act, to oversee the development, implementation and monitoring of technical and operational rules of practice for electricity and natural gas public utilities licenced by the Energy Commission.

The Technical Committee is composed of members determined by the Commission's Board and has sub-committees with responsibilities for electricity and natural gas. The Committee in 2017 was chaired by Dr. Emmanuel Larrey of VALCO. It also has representative from the Commission, Bui Power Authority, GRIDCo, Newmont Ghana, Energy Foundation, Attorney-General's Department, PURC, NEDCo, VRA, Petroleum Commission, GNPC, BOST, Ghana Gas, ECG and other sector institutions.

## Organogram of the Energy Commission

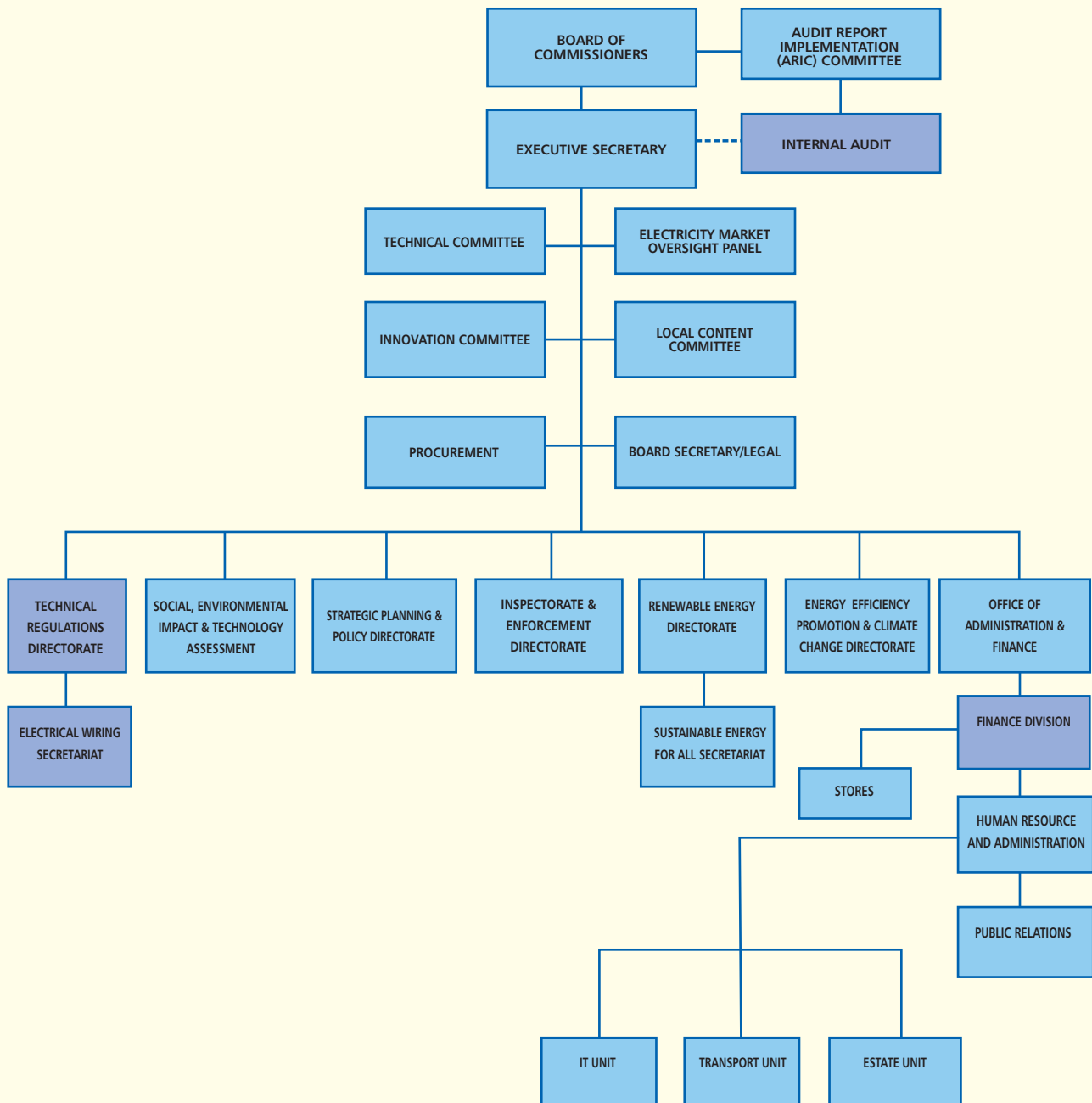


Figure 1: Organogram of the Energy Commission

### Our Mission

The Mission of the Energy Commission is to regulate and manage the development and utilization of energy resources in Ghana to ensure the provision of affordable energy supplies in a reliable, efficient and secure manner in order to promote the social and economic well-being of the people of

Ghana, and to enhance environmental quality and public safety.

### Our Vision

The Energy Commission's vision is to become a leading energy planning and regulatory institution reputed for excellence, innovation and transparency in Africa and beyond.

## TECHNICAL REGULATION

### 1. IMPLEMENTATION OF THE ELECTRICAL WIRING REGULATIONS

In fulfillment of its mandate, under section 56 of the Energy Commission Act 1997 (Act 541), the Electrical Wiring Regulations (EWR) was passed into law by the Parliament of Ghana in February 2012 to ensure the safety of persons, property and livestock from the use of electrical energy. Pursuant to regulations 8 of the EWR, the Commission issued guidelines for the certification of electricians.

The Commission in 2017 collaborated with the agencies involved in the certification process and coordinated activities towards the certification of the next batch of Electrical Wiring Practitioners under the developed certification scheme. One thousand, five hundred and fifty-seven (1,557) electrical wiring professionals and sixty-six (66) electrical wiring inspectors were certified during the year.

The Commission also designed and launched an android mobile application for electrical wiring practitioners. This mobile App is to enable property owners and developers to identify and

engage certified electricians and inspectors within their localities.

The Commission successfully carried out monitoring exercises in thirty (30) NEDCo and ECG districts to ensure compliance with the Electrical Wiring Regulations. The following were observations from the monitoring exercises:

- Overcharging of clients by Certified Electrical Wiring Professionals (CEWPs).
- CEWPs filling and endorsing forms and ICC without visiting the facilities, recommending and approving values which are not within the safe range for service connection.
- Ill-equipped CEWPs.
- CEWPs giving out endorsement stamps to non CEWPs to work with.
- Self Help Electrification Project (SHEP) electrical contractors not certified by the Energy Commission.
- Clients unaware of the Electrical Wiring Programme.



**Figure 2:** Socket without a circuit protective conductor



**Figure 3:** Exposed, live conductor





**Figure 4:** Exposed live cables

The monitoring exercise revealed the shortcomings of the implementation of the Electrical Wiring Regulations and provided direction for improvement and re-strategising for a successful nationwide implementation.



**Figure 5:** Exposed power board at KMA

The Commission organised inspections at Kumasi Central Market, Kumasi Metropolitan Assembly, Sunyani Municipal Assembly, Koforidua Municipal Assembly and La Trade Fair centre as part of activities to launch the full implementation of the Electrical Wiring Regulation.

It was observed that the main power board of KMA was accessible to unauthorised people and exposed to the weather. All the Low Voltage (LV) switchgears mounted on the board were obsolete. The seal on the energy meter had been broken.

Consumer units at the Legal, Stores, School Feeding and HR units at KMA had been mounted too high above the standard 1.8 meters. 85/105 W inefficient Compact Fluorescent Lamps (CFLs), obsolete ceiling fans, regulators and one-way switches had been installed. Hanging socket outlets had no CPC in the circuits.

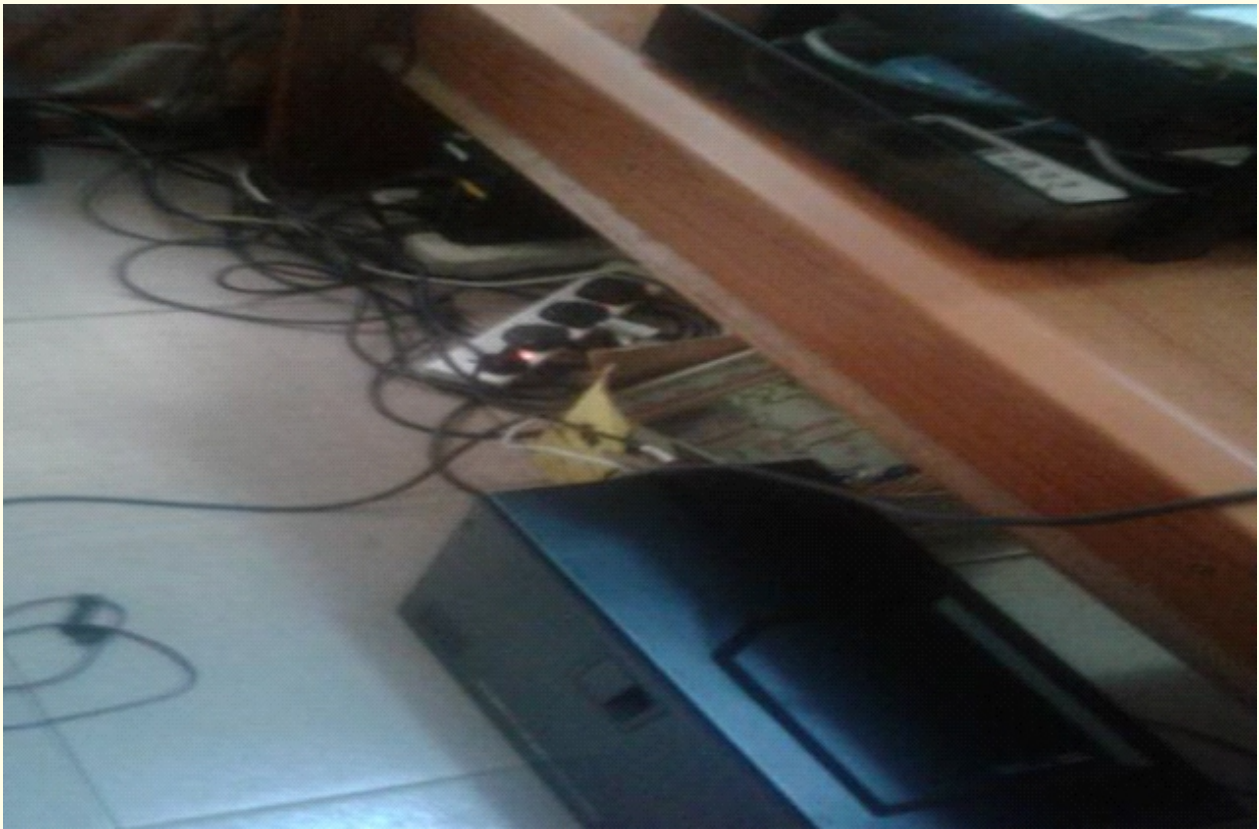


**Figure 6:** Consumer Units mounted too high



**Figure 7:** Energy Inefficient CFL

Extension boards of Finance, Server Room and GIFIWS Units were overloaded. The switch was mounted on a wooden board and the air conditioner was not earthed. The wiring of the socket outlets was sub-standard.



**Figure 8:** Overloaded Extension Boards



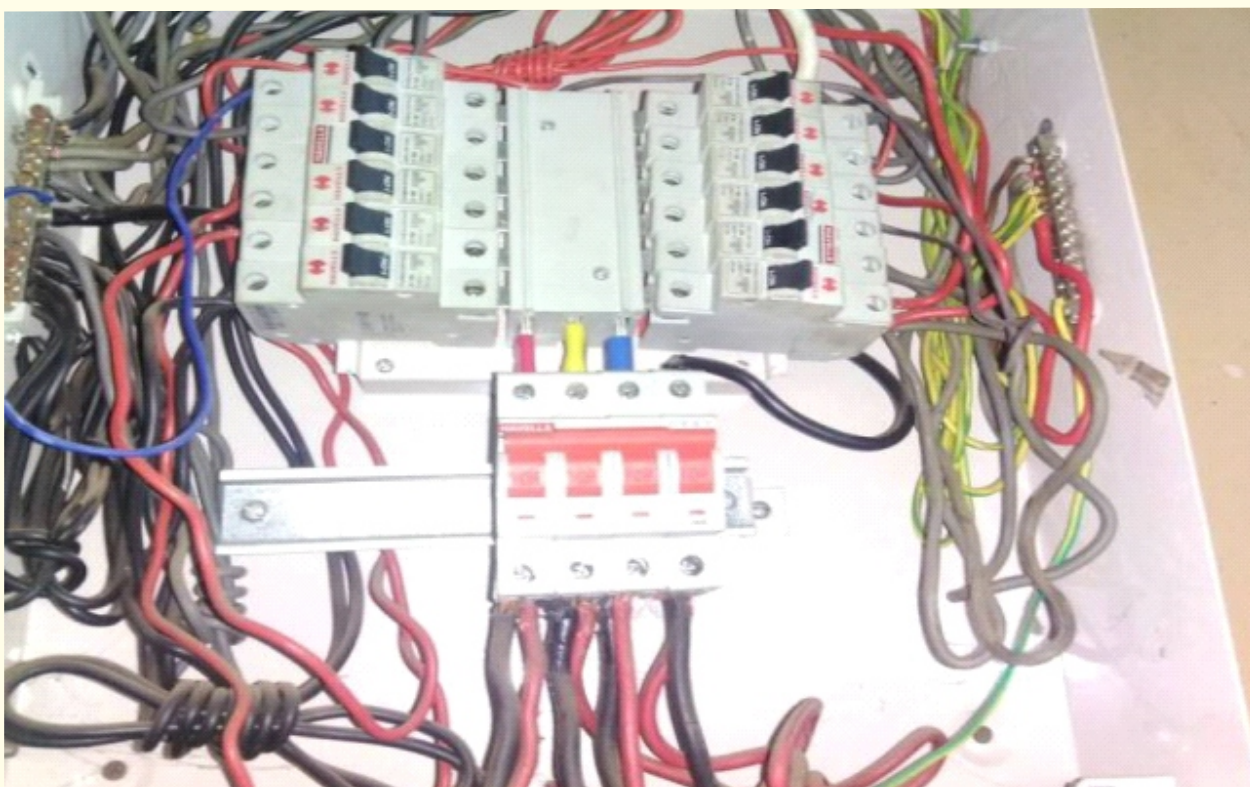
**Figure 9:** Sub-standard Wiring

The following were observations from the ground floor of the building:

- Untidy Cabling and unlabeled Distribution Board (DB)
- Neutral and CPC do not match Sub-circuits



**Figure 10:** Untidy Cabling and DB not labelled



**Figure 11:** Neutral and CPC do not match Sub-circuits

The following were recommended for the optimum usage of the electrical infrastructure of Kumasi Metropolitan Assembly:

- The assembly should fix all the defects, deviations, non-conformities and critical concerns as this will ensure the safety of persons and enhance performance of duty of personnel.
- The assembly should use licensed electrical professionals to undertake the maintenance and correction of the outstanding defects, deviations, non-conformities and critical concerns in accordance with regulation 7 of the Electrical Wiring Regulations 2011, L.I. 2008.
- The main power board must be replaced with a modern panel board that will perform the duty of existing obsolete ones. The power distribution board should also be fenced to prevent accessibility by unauthorized people.
- The Assembly should completely re-wire the U-shaped courtyard in accordance with Regulation 11 section 3 of the Electrical Wiring Regulations 2011, L.I. 2008.
- The Assembly should install Residual Current Device (RCD) at its offices and workshops to trip the circuit in event of earth leakage to protect equipment.

The Energy Commission developed a framework for qualification and registration of electrical contractors in the business of internal electrical wiring in collaboration with the Ministry of Works and Housing and Ghana Fire Service.

## 2. IMPLEMENTATION OF WHOLESALE ELECTRICITY MARKET

The establishment of the Wholesale Electricity Market (WEM) as anticipated under the Power Sector Reform required the development and establishment of a Code of Practice that would conform to the technical regulations established for the restructured Wholesale Electricity Market (WEM). This requirement of the Power Sector Reforms is part of the mandate of the Energy Commission as specified in the Energy Commission Act, 1997 (Act 541).

The following licences and permits were granted during the year:

- Bulk Customer Permits were renewed for Western Diamond Cements and Pioneer Food and Cannery Limited;
- Renewal of Construction Permit for Marinus Energy Limited;
- A Provisional Wholesale Electricity Supply Licence was granted to Ghana Power Generation Company (GPGC) Limited;
- Operational Wholesale Supply Licences were granted to Genser Ghana Limited, and Sunnon Asogli Ghana Limited;
- An amendment to the Wholesale Supply Licence (Operational Licence) of Karpowership Ghana Limited to increase the installed capacity of the plant from 250MW to 470MW was granted.
- The Commission conducted two monitoring activities on the construction of ENI's Onshore Receiving Facility at Sanzule and approved all golden joints for interconnection with the National Gas Interconnected Transmission System that were tested. The Commission therefore renewed ENI's construction permit for the project.



**Fig 12:** Onshore approach of sea line



**Fig 13.** Installation of train 2

### 3. DEVELOPMENT OF STREET AND PUBLIC LIGHTING REGULATIONS

The lack of a regulatory framework and standards for public lighting has resulted in huge losses to the distribution utilities in whose network street lights are installed. The Energy Commission therefore developed draft Regulations for public lighting to provide a framework for the enforcement of standards for public lighting in Ghana. The standards for public lighting were also developed by the Ghana Standards Authority.

### 4. DEVELOPMENT OF NATIONAL ELECTRICITY DISTRIBUTION METERING CODE

Electricity meters measure and display power consumption in residential, industrial, and

commercial dwellings, as well as sub-stations in the electric grid. The design of these meters is evolving rapidly, and different solutions and architectures are required to ensure that consumers know what their electricity costs are and are billed right. It is also worth noting that defective meters can adversely affect the distribution utility by contributing to its commercial losses.

The Energy Commission as a technical regulator is responsible for ensuring that all electricity meters installed in the country register the correct quantity of electricity consumed. This will ensure that consumers pay for the actual amount. The Commission developed a draft National Electricity Distribution Metering Code and incorporated metering standards received from Ghana Standards Authority.

## ENERGY EFFICIENCY AND CLIMATE CHANGE (EECC)

### 1. DEPLOYMENT OF AUTOMATIC TIMER SWITCHES (ATS)

The Energy Commission in May 2014 launched the “Switch-off-a-Freezer” Campaign, during which consumers were encouraged to switch off their deep freezers between 6 pm and midnight. This was to reduce the peak load and avoid load shedding during the 2014 World Cup Tournament. A load reduction of 70MW was recorded during the evenings over the period confirming the effectiveness of the campaign.

While participants in that exercise did it voluntarily, many complained that they were not always at home to turn the freezers off at the specified time or were unable to stay awake until midnight to turn the freezers back on.

To overcome these challenges and make it possible for users of freezers to automatically switch them off and on at specific times in the night to save energy, the Commission in the year 2017 procured about 37,500 automatic timer switches and deployed them in selected communities and state institutions.

A total of 32,893 ATS were distributed to communities and seven (7) state institutions comprising four (4) security agencies and government institutions. The security agencies that benefited from the distribution were the Ghana Air Force, the Ghana Army, the Ghana Police and the Prisons Services. A test conducted on the energy saving potential of the timers over a 48-hour period indicated an energy savings of about 30%.

More than 10,000 educational flyers on the timer switches were also distributed to the public to inform consumers of the availability of the technology and its usefulness.

### 2. ENERGY EFFICIENCY AND CONSERVATION CAMPAIGN AND AWARENESS CREATION

Energy efficiency and awareness creation campaigns are effective tools that can be employed to enable consumers change their energy use behaviours and conserve and use energy efficiently. In view of these potential impacts, public awareness campaigns are used by the Commission as one of the strategies to promote energy efficiency and conservation in Ghana. The Commission employs the use of documentaries, jingles, training workshops, radio interviews, posters and flyers for energy efficiency and conservation campaigns and awareness creation.

The Commission in 2017 successfully undertook public awareness creation campaigns for a number of institutions, consumer groups and the general public nationwide. Consumer groups and associations namely, the Ghana National Association of Teachers (GNAT), Ghana Pentecostal and Charismatic Council (GPCC) and Dress Makers and Beauticians Association were educated and sensitized on energy efficiency and conservation at various locations across the country.

In addition, energy efficiency and conservation jingles were played on major radio networks across the country and energy efficiency educational materials in the form of leaflets, flyers and brochures distributed nationwide to consumers.

### 3. CREATION OF DATABASE AND WEB APPLICATION OF EFFICIENT REFRIGERATING APPLIANCES

As provided under Section 2 (Objective and Functions of the Commission) of the Energy Commission Act, 1997 (Act 541), the Energy Commission has the responsibility of promoting

energy efficiency and productive uses of electricity, natural gas and petroleum products. The Commission, over the years, has therefore taken measures to promote energy efficiency which includes the operation of a mandatory appliance standards and labelling regime. Under this regime, importers and retailers of appliances such as refrigerators, air conditioners and lighting bulbs are required to import and sell only products that meet minimum efficiency and performance standards.

As part of the strategy to ensure that these regulations are complied with, the Energy Commission collected data on energy efficient refrigerators and established a web-based database with related application (APP) for refrigerating appliances in 2017 made available

for download on Google Play Store. The database and the App were successfully launched and importers of refrigerating appliances and selected members of the press were educated on the use and benefits of the App.

The App enabled consumers verify whether refrigerating appliances met the minimum energy efficiency standards set by the Commission before purchase. The APP also helped users find the nearest distributing and retail outlets for these appliances via Google map or phone contacts. The App further provided energy efficiency and conservation tips for refrigerating appliances.

## STRATEGIC PLANNING AND POLICY

### 1. NATIONAL ENERGY DATA PROCESSING AND INFORMATION CENTRE (NEPIC)

In fulfilment of section 2(d) of the Energy Commission Act, 1997, (Act 541), which requires the Commission to secure a comprehensive database for national decision making, the Commission has established the National Energy Data Processing and information Centre (NEDPIC).

In the year 2017, the Energy database was updated with 2016 energy data including power plants and their corresponding capacities. LPG points of sale/distribution coordinates were also updated in the system. Furthermore, improvements were made to make the Ghana Energy Access (GhEA) Toolkit more user-friendly and easy to navigate. A new interface was designed to enable the Team to track details of users of the platform.

### 2. UPDATE OF THE STRATEGIC NATIONAL ENERGY PLAN (2016-2030)

The Energy Commission is mandated by Act 541 to prepare, review and update periodically indicative national energy plans to ensure that all reasonable demands for energy are met in a sustainable manner. The Commission is updating the Strategic National Energy Plan (2006 to 2020), which was published in 2006. The update has become necessary as a result of major changes that has occurred in the country's energy-economy landscape, such as the discovery of commercial quantities of crude oil in 2007 and the rebasing of the country's economy in 2006. The goal of the SNEP is to contribute to the development of a sound energy market that would provide sufficient, viable and efficient energy services for Ghana's economic development through the formulation of a comprehensive plan that will identify the optimal path for the development, utilisation and efficient management of energy resources available to the country.



The following were achieved during the period under review:

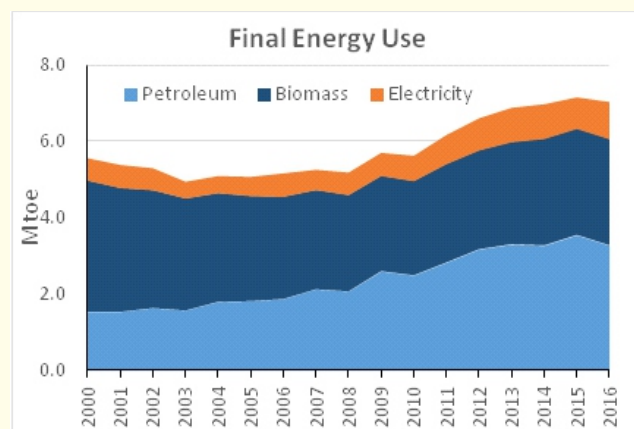
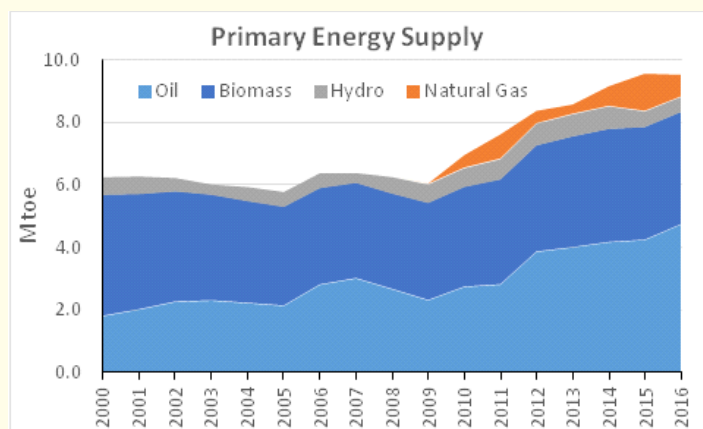
1. Remodelling of the Energy Demand Model to reflect changes in planning period from 2018-2030 to align with the Sustainable Development Goals (SDGs) and Africa Agenda 2063
2. Incorporating the new government's, flagship programmes such as planting for food and jobs, one-district-one-factory etc. into the demand model to evaluate their impact on energy demand in the short, medium to long term. The effect of introducing of electric vehicles in the transport sector will have on electricity and petroleum products demand was also modelled.
3. Completion of the draft Demand Report.
4. Following a request from the Ministry of Energy to estimate the impact of embedded generation on grid electricity, the supply model was restructured to include capacities from embedded generation.

5. Remodelling of the electricity supply strategies to cover new planning period spanning 2018 to 2030 was also completed.

### 3. UPDATE OF NATIONAL ENERGY STATISTICS

The National Energy Statistics (2000-2016), which contains the Energy Balance and Indicators, Primary Energy Supply, Total Final Energy Use, Electricity Supply and Use, Petroleum Supply and Use, Use of Biomass and the prices of all forms of Energy used in the Economy was updated and published on the Commission's website

The second edition of key Ghana Energy Statistics was prepared and hardcopies were printed and distributed to stakeholders and the general public. The Key Ghana Energy Statistics publication is a handy pocket-sized document which summarises key energy data for Ghana. It contains timely and clearly presented data on energy resources, energy production and consumption in Ghana.



Figures 14 & 15: Primary Energy Supply and Final Energy Use

### 4. UPDATE OF ENERGY OUTLOOK

The 2017 Energy Outlook for Ghana was prepared and made available on the Commission's Website. The outlook serves as

information guide to energy sector operators as well as the wider business community wishing to operate in the country on the energy demand and supply forecast for 2017.

## SOCIAL, ENVIRONMENTAL IMPACT AND TECHNOLOGY ASSESSMENT

All power generating companies are required to obtain both the Energy Commission's Electricity Generation Licence and the Environmental Protection Agency (EPA) permit for electricity generation. As part of the licensing conditions, the companies are to ensure that their operations are environmentally compliant.

In 2017, the Commission focused on environmental compliance monitoring of two

licensed power plants: Karpowership (235MW) and BXC (20MW) Solar PV Power Plants at Tema-Newton and Gomoa-Onyadze respectively.

### 1. **KARPOWERSHIP (235MW) POWER PLANT**

The environmental compliance monitoring of Karpowership power plant was completed and recommendations sent to Karpowership, and the Ministry of Energy.



*Image 15: Team on Plant Inspection*



*Image 16: Engagement meeting with opinion leaders*

The findings on the activities of Karpowership's operations revealed that the plant's activities were environmentally compliant. However, the Commission made the following recommendations to the company;

1. To Install stationary air quality monitors to capture real time and spot emissions; and

2. To Complete environmental management plan for submission to the EPA and the Energy Commission.

## 2. **BXC (20MW) Solar PV Power Plant**

The Environmental Compliance Monitoring of the BXC 20MW Solar PV Power Plant at Gomoa-Onyadze was completed.



*Image 17: Team inspecting plant site of BXC at Gomoa-Onyadze*

The findings on the activities of BXC's operations revealed that the plant's activities were environmentally compliant. However, the company is to ensure that the following measures are complied with;

1. Completion of environmental management plan for submission to the EPA and the Energy Commission,
2. Completion of the corporate social responsibility agreement with the community.

## INSPECTION AND ENFORCEMENT

### 1. INSPECTIONS AND ENFORCEMENT OF REGULATIONS COVERING THE NATURAL GAS SECTOR

The Commission undertook an inspection and enforcement visit to the Onshore Receiving Facility (ORF) to ascertain compliance with LI 2189 following the issuance of Siting Permit. The Commission advised ENI to reclaim all lands used for excavation for laterite. All lands were reclaimed as a result and handed back to farmers in Sanzule, Western Region.

A stakeholder consultation was also held in Sanzule, Bakanta and Ekwe all in the Western Region to resolve recruitment issues between locals of the communities and ENI contractors. Three visits were also paid to the Gas Processing Plant at Atuabo to monitor compliance with Operating Licence conditions. The following were observed:

1. Corrosion challenges at the high pressure area.

2. A proposal had been submitted to the World Bank for support to engage a consortium to carry out an Integrity Audit on the Western Corridor Natural Gas Infrastructure.
3. Ghana had untested and uncalibrated fire extinguishers and gas detectors.

Two inspection visits were undertaken in July and November 2017 to Wankang Ceramics Limited and Twyford Ceramics in the Western Region, both of whom are Bulk Customers for low pressure natural gas offtake. Wangkang Pressure Regulating and Metering Station (PRMS) was getting corroded. There was an exposed gas pipeline from the station to the ceramic plant. Twyford had not fenced their PRMS from the public.

### Enforcement of Regulations of Electricity Supply, Transmission and Distribution

Meter accuracy checks were undertaken in the Ashanti SBU of ECG, Eastern and Western Regions of ECG, and also NEDCo. The result of the test is presented in Table 1

**Table 1:** Meter Accuracy Test Result

Region	No. of Meters Sampled	Number of Meters that Failed Test	% of failure
ECG Ashanti	24	7	29.2
ECG Western	13	7	53.8
ECG Eastern	21	1	4.8
NEDCo Upper West & Northern	24	9	37.5

The above observations have been communicated to ECG and NEDCo to address.

2. Transformer monitoring of ECG was undertaken in the Takoradi and Sekondi Districts of the Western Region of ECG.

- During the transformer monitoring inspections of ECG, out of 31 sampled transformers monitored in Takoradi and Sekondi Districts of the Western Region, two (2) recorded overloading of more than 100%.
- The above observation has also been communicated to ECG.

3. Inspection visits were made to TAPCO, TICO, Ameri, Genser Energy, Karpowership, Asorgli, Aska power, Cenit and Early power to assess their level of compliance with standards. The institutions were educated on the regulation and the need to submit quarterly reports

4. Energy Audit inspections were commenced for some public service institutions. It was successfully piloted for the Judicial Service in Ashanti Region successfully planned. . Report has been forwarded to the Judicial Service.

Energy audits were carried out for Securities and Exchange Commission, US Peace Corps, the Energy Commission of Ghana and the Ministry of Energy.

5. Transformer monitoring of ECG was undertaken in Ashanti SBU, Eastern Region and Takoradi and Western Region.

- During the transformer monitoring inspections, overloaded transformers were identified.
- The above observation has also been communicated to ECG.

6. The timer switches used for the Energy Efficiency project were tested by the Unit. Report of the test was used in the publicity campaign of the timer switches.

## Enforcement of Energy Efficiency Regulations

1. 2,770 containers, containing 390,876 new fridges, were inspected at the Tema Port; and of these, 46, 223 were non-compliant. Relabeling and resubmission of test reports was advised/recommended.

2. 776 containers, containing 148,583 air conditioners, were inspected; and out of these 18, 320 were non-compliant. Relabeling and resubmission of test reports was advised/recommended.

3. 63 cases, in respect of the above inspections, were recommended for relabeling, as part of the enforcement activities, to comply with star ratings.

4. 5,455 pieces of used refrigerators were seized at the Tema and Takoradi ports for destruction.

5. 33 areas were inspected during market surveillance, and various enforcement actions taken. 13 cases of various models were asked to be taken off the market.

6. 447 refrigerating and air conditioning models' test reports were reviewed and approved for import.

## Monitoring and Enforcement of License and Permit Conditions and Regulations in the Renewable Energy Industry.

1. The Commission carried out 19 inspection visits to the facilities of new licence applicants in the renewable energy industry as part of the processes of granting new licences. The exercise resulted in the issuance of 19 new licences.

2. The Commission paid 11 inspection visits to the facilities of licenced operators in the renewable energy industry to

monitor their compliance with renewable energy licence conditions and regulations. Out of the number of facilities visited, 8 (eight), representing 72.2%, of the operators were found to be compliant with regulations, and the conditions of their Licences while 3 (three), representing 27.8%, of the operators were non-compliant with regulations, or the conditions of their Licences.

3. In response to the findings of the visits, the Commission undertook the following measures in relation to companies which were found to be non-compliant with regulations, or the conditions of their respective Licences:

**a. Mienergy Technology Company Limited**

For starting construction activities of their 20 MW Solar Power Plant at Gomoa Onyaze, in the Central Region, without a Construction Permit, the company was made to,

- i. Stop construction activities on their site;
- ii. Pay a total amount of GH¢ 76,000 (covering a first fine of GH¢ 12,000; Second fine of GH¢ 60,000; and GH¢ 4,000 for four compliance monitoring visits to the company's site to monitor their compliance with the Commission's directives, within the period);
- iii. Sign a bond, to be of good behaviour, in respect of their operations in the renewable energy industry.

**b. Sol Plus Ghana Limited**

For not complying with Conditions 6.7, 6.8, and 6.9 of their Charcoal Production (for Export) Licence, the company was DENIED a Permit to export 40 tonnes, equivalent to two (2), 40-footer containers of charcoal.

**c. Oskan Industries Limited**

For producing an estimated 870 bags of charcoal without a Charcoal Production (for export) Licence, the Energy Commission denied the company a Permit to export the charcoal; they were directed to sell the charcoal to the local market.

4. The Commission, per the orders of the Accra Circuit Court in respect of the illegal exportation of two (2), 40-footer containers of charcoal out of the country, auctioned the charcoal to the general public at a value of GH¢ 15,047.74.
5. The Commission monitored the energy production and performance of three (3) solar PV power plants in the country, namely:
  - (a) 2.5 MW Plant, at Navrongo, in the Upper East Region;
  - (b) 0.715 MW Plant, at the University of Ghana, in the Greater Accra Region; and
  - (c) 20.0 MW Plant, at Gomoa-Onyaze, in the Central Region.
- (a) The Commission initiated a stakeholder engagement process with its stakeholders in the renewable energy industry to explore avenues of better co-operation for the effective enforcement of regulations in the industry;
- (b) A meeting held with the Ghana Revenue Authority (Customs Division) resulted in the Energy Commission's team at the Tema Port being invited to jointly inspect containers of charcoal being processed for export.
6. The stakeholder engagement, inspection visits, and monitoring and enforcement activities also created more awareness about the regulations and licensing

guidelines in the renewable energy industry.

7. As part of efforts to clamp down on charcoal smuggling, the Commission further initiated arrangements to establish surveillance presence at Bawku in the Upper East Region, and Dormaa in the Brong Ahafo Region. The Commission identified two (2) members of staff to be stationed at the border town in the Upper East Region.

### **Enforcement of Regulations in the Renewable Energy Industry.**

1. The Commission inspected the offices of twenty-eight (28) companies that applied for Installation and Maintenance Licences and eight (8) companies that applied for Importation Licences, to determine the nature and services being offered by the companies.

2. The production facilities of three (3) companies involved in charcoal export and two (2) companies involved in briquette export were inspected prior to the grant of Charcoal Production for Export and Briquette Production for Export Licences respectively, to ensure compliance with the provisions of the Licence Manual for Renewable Energy Service Providers. These inspections were carried out in order to verify the sources and quantities of feedstock used for the production of charcoal and briquettes.

3. The Commission also carried out compliance monitoring exercises at eleven (11) charcoal production facilities to ensure that charcoal meant for export were produced at the facilities using the approved feedstock and production technologies.

## RENEWABLE ENERGY PROMOTION

### 1. NATIONAL ROOFTOP SOLAR PROGRAMME

The first phase of the National Rooftop Solar Programme (NRSP) began on the 8th of February 2016 and was targeted at residential facilities (homes) in urban areas. It recorded a total number of 1,006 out of 2,823 applicants being granted approval for the installation of 500Wp solar panels each.

Under the Programme, a capital subsidy was given to beneficiaries in the form of free solar panels up to a maximum capacity of 500Wp. The prospective beneficiary must have changed all the lamps in his/her facility to LED lamps and installed the requisite Balance of System (BoS) components such as inverter, batteries, charge controllers from an accredited solar vendor whose products met the minimum technical standards set by Ghana Standards Authority (GSA).

The key challenge identified during the implementation of the first phase of the Programme was the inability of some of the applicants in paying for the BoS components, which had to be done before the approval of the 500Wp solar panels. To help address this challenge, afb Ghana Limited, a financial services institution, collaborated with the Energy Commission to launch a solar credit facility to help prospective and existing applicants of the Programme purchase the BoS components. A proposal for funding to support the National Rooftop Solar Programme (NRSP) was submitted to the Green Climate Fund (GCF) for consideration.

In an effort to contribute to the national goal of universal access by 2020 and promote socio-economic development through Productive Uses of Energy (PUE), the Commission provided solar PV systems of 500Wp capacity to 200 rural

households in sixteen (16) off-grid communities in the Kwahu East and South Districts of the Eastern Region. An assessment of the pilot project revealed the following benefits to the communities:

- 1) Increased economic activities such as petty trading due to longer working hours as a result of availability of lighting systems;
- 2) The beneficiaries no longer buy batteries for radios and torchlights at an average cost of GHS16.00 per month;
- 3) School children are able to study in the evening due to the improved lighting systems which have replaced the use of torchlights;
- 4) The security in these off-grid communities has improved due to the availability of lighting systems; and with the installation of these solar systems, the purchase of television sets to access information is increasing.

The Commission secured partial funding from the Skills Development Fund (SDF) of Council for Technical and Vocational Education and Training (COTVET) to train 250 technicians in the design, installation and maintenance of solar PV systems at Deng Solar Training Centre, Accra and University of Energy & Natural Resources (UENR), Sunyani. The training began in November, 2017 and is expected to end in March, 2018.





**Figure 18 :** 500Wp solar PV panel installed in a Rural Household



**Figure 19:** Installed Balance of System (BoS)



**Figure 20:** A system used in charging a mobile phone and radio



**Figure 21:** Solar PV System at Asesieso Basic School

## 2. ANNUAL RENEWABLE ENERGY FAIR

In fulfilment of the provisions of the Renewable Energy Act 2011, (Act 832), the Commission in February, 2015 launched the First Ghana Renewable Energy Fair (Conference and Exhibition). The objective of the Fair is to provide a platform for renewable energy industry practitioners to deliberate on strategies aimed at promoting the sustainable development of energy from renewable sources in Ghana.

Following the success of the previous Fairs, the 3<sup>rd</sup> Ghana Renewable Energy Fair was held from 10<sup>th</sup> – 12<sup>th</sup> October, 2017, on the theme: “Renewable Energy: An Engine for Distributed Wealth Creation”. The conference and exhibition were held concurrently from 9:00am to 5:00pm over the 3 days at the Accra International

Conference Centre. The conference consisted of various sessions on the following thematic areas:

- 1) Renewable energy in a productive base economy;
- 2) Productive uses of renewable energy;
- 3) Distributed electricity generation;
- 4) Financing Renewable Energy and Energy Efficiency Interventions in Buildings; and
- 5) Improved cookstoves and alternative fuels.

Twenty-two (22) technical presentations were made during the Fair. Experts from across the globe shared their knowledge on the thematic areas listed above.



**Figure 22:** Scenes from the 3<sup>rd</sup> Renewable Energy Fair showing the Seminar Sessions and Exhibition Booths

The exhibition attracted huge interest from the various industry players in the renewable energy and energy efficiency sectors. A total of 41 companies exhibited at the Fair and they showcased products and technologies from solar PV, biomass waste to electricity, cookstoves and fuels, power generators, distributors, regulators and energy efficiency solutions.

**About 2,364 people attended the Fair.**

A cocktail reception was organised in collaboration with the Global Alliance for Clean

Cookstoves to outdoor H. E. Mrs. Samira Bawumia as Ambassador for Clean Cooking for Ghana.

The 3<sup>rd</sup> Renewable Energy Fair and Exhibition afforded the Commission the platform to reach out to stakeholders including government agencies, businesses and the general public to inform and educate them on opportunities available and benefits to be gained from deployment of renewable energy solutions.



**Figure 23:** Some high-level dignitaries who participated in the 3<sup>rd</sup> RE Fair including wife of the Vice President, H.E. Samira Bawumia, the Deputy Minister for Energy (Petroleum), Mr. Amin Adam and the Chair of the Energy Commission, Professor George Panyin Hagan

### 3. MAPPING OUT RENEWABLE ENERGY GRID INTEGRATION PROJECT (MOREGIP)

As at 31<sup>st</sup> December, 2016, one hundred and four (104) companies had been granted Provisional Licences for wholesale supply of electricity from renewable energy resources with about 90% of them being solar and wind projects. However, only one of the companies had been able to construct a 20MW solar PV plant which is connected to the distribution system. This is attributed to a number of factors including the absence of information on the capacity levels of intermittent renewable energy (solar and wind) that could be injected into the grid network/substations in the country.

The Energy Commission in collaboration with Ministry of Energy, GRIDCo, ECG and NEDCo conducted a study to determine capacity levels of the intermittent generation (solar and wind) systems that could be injected into the grid network/substations in the country. The study focused on solar power injection at three (3) transmission and five (5) distribution primary substations respectively. The pre-selected transmission substations are located at Buipe, Kintampo and Sawla, and the distribution primary substations are at Agona and Kuntunase (within the Anwomaso 33kV network), and Bunso, Tafo and Koforidua (within the Tafo 33 kV network).

The results from the technical analyses indicated that, the maximum solar PV that could be injected into the selected transmission and distribution substations are;

- |                          |  |
|--------------------------|--|
| 1) Buipe BSP             | - 38.96 MWp (≈ 39 MWp)   |
| 2) Sawla BSP             | - 32.57 MWp (≈ 33 MWp)   |
| 3) Kintampo BSP          | - 61.62 MWp (≈ 62 MWp)   |
| 4) Tafo 33 kV network    | - 20 MWp (interconnected at the Old Koforidua 33 kV bus)                                   |
| 5) Anwomaso 33kV network | - 40 MWp (20 MWp each interconnected at the Agona and Kuntunase 33 kV switching stations). |

### 4. DEVELOPMENT OF REGULATION FOR THE WOODFUEL INDUSTRY IN GHANA

The sustainable exploitation of biomass resources for firewood and charcoal production continue to contribute significantly to deforestation and forest degradation in Ghana with its attendant impact on agriculture productivity and associated environmental impacts. Over 70% of wood resources are lost in the process of charcoal production and transportation to urban consumers due to the use of inefficient kilns and the overloading of trucks.

In response to the above and within the Commission's mandate to regulate and manage the utilization of energy resources in Ghana, the Commission initiated a process to develop regulations for the Woodfuel Industry. The ultimate goal is to ensure sustainable production, transportation, and marketing of woodfuel.

Three taskforces comprising representatives from selected stakeholder organisations prepared reports on the current state of the production, transportation and marketing subsectors of the Woodfuel Industry. These reports revealed priority areas needed to be addressed in the regulations.

The services of the two cookstove testing laboratories at Technology Consultancy Centre in KNUST, Kumasi and Institute of Industrial Research of CSIR, Accra, were engaged to conduct a baseline study of

## 5. DEVELOPMENT OF STANDARDS AND LABELLING SCHEME FOR THE IMPROVED COOKSTOVE MARKET

the performance of seven (7) commercially available domestic and seven (7) institutional biomass cookstoves being promoted in Ghana. Water Boiling Tests were conducted to determine the thermal efficiency and emissions (PM2.5 and Carbon Monoxide, CO) performance of the selected stoves. The Commission in collaboration with the Ghana Alliance for Clean Cookstoves and Fuels (GHACCO) used the results as a benchmark to establish minimum performance requirements for biomass stoves in Ghana. The final standard document was gazetted in December 2017 by the Ghana Standards Authority (GSA).

The Commission received technical assistance from the Global Alliance for Clean Cookstoves and Fuels (GACC) to develop and finalise the draft cookstove label for Ghana and also developed a Monitoring, Verification and Enforcement Manual for the cookstove standard and labelling scheme. The Star Label was developed through a qualitative market research which explored consumers' comprehension of the proposed biomass cookstove standard and labelling scheme. This resulted in the publication of a report, "Consumer Awareness and Comprehension Market Research of Prospective Cookstoves Labelling Programme in Ghana".

The final star label for biomass cookstoves is shown below.

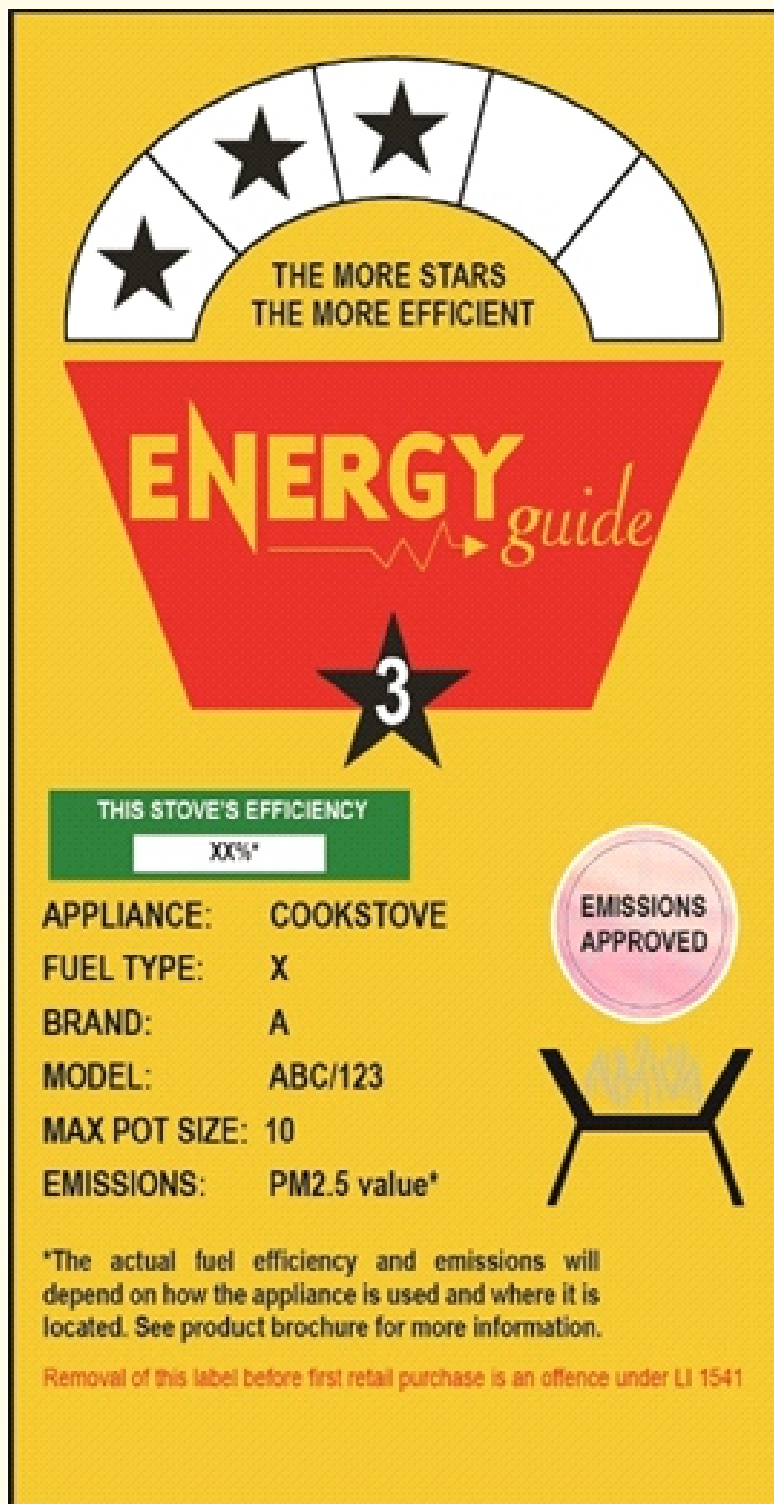


Figure 24: Star Label for biomass cookstoves

The standard and labelling process in Ghana and lessons learned from the consumer market research were shared at the Clean Cooking Forum 2017 in New Delhi, India.

A draft Monitoring, Verification and Enforcement Manual for the cookstove standard and labelling scheme was prepared in collaboration with CLASP, an international non-profit based in Washington DC, USA.

## 6. IMPLEMENTATION OF SUSTAINABLE ENERGY FOR ALL (SEFORALL) INITIATIVE

Five (5) SEforALL related activities and businesses were identified and visited. They are: **Zaacoal Limited**, Dodowa, Greater Accra Region, producer of carbonised coconut waste briquette; Ahotor Fish Oven Pilot Programme at Akplorworkor, Volta Region, being implemented by SNV; **PENS Food Bank**, Sekyedumase, Ashanti Region, builder of solar hybrid drying systems; **Integrated Water and Agricultural Development (IWAD) Irrigation Project**, Yagaba, Northern Region; and **Kintampo Health Research Centre**, Kintampo, Brong Ahafo Region, which conducts research on exposures to pollutants from the use of biomass fuels in a variety of stoves and LPG.



Figure 25: Coconut waste briquette at Zaacoal, Dodowa



Figure 26: Drying of maize on a solar dryer at PENS Food Bank, Sekyedumase



Figure 27: Ahotor oven being used to smoke shrimps at Akplorworkor



Figure 28: Centre pivot irrigation at IWAD, Yagaba, N/R

The Commission organised workshops in six regions for District Assembly staff and agricultural officers to create awareness on the productive use of energy interventions available and their benefits. The regions covered were Volta, Ashanti, Brong Ahafo, Western, Northern and Upper West.



*Figure 29: Ashanti Region Productive Use of Energy Workshop*

Regular updates on the implementation progress of Ghana's SEforALL Action Agenda were given through the preparation and dissemination of quarterly electronic SEforALL Ghana Newsletters to stakeholders in and outside the country.

## **7. LICENSING OF RENEWABLE ENERGY SERVICE PROVIDERS**

### **Charcoal, Briquette and Pellet Licences**

The Commission granted Charcoal Production for Export Licences to three (3) companies in 2017 for the production of charcoal for export. Briquette Production Licences were also issued to two (2) companies for the production of briquette for export.

## 8. WHOLESALE ELECTRICITY SUPPLY LICENCES

Twenty-two (22) Provisional Wholesale Electricity Supply Licences were granted to Independent Power Producers (IPPs) to generate a total

capacity of **1452 MW** of electricity from renewable energy sources. The breakdown of the Provisional Licences granted, the Siting and Construction Permits issued as at 31<sup>st</sup> December, 2017 according to renewable energy technologies is presented in Table 2:

**Table 2:** Provisional Wholesale Electricity Supply Licences & Permits granted as at December, 2017

LICENCES AND PERMITS ISSUED AS AT DECEMBER, 2017			
	Technology	Number	Capacity
Provisional Licences issued	Solar	67	3528.5
	Wind	15	1410
	Small and Medium Hydro	5	208.62
	Biomass/Waste 2 Energy	16	790.81
	Wave	1	20
	<b>Total</b>		<b>104</b>
Siting Permits issued	Solar	29	1147
	Wind	3	300
	Small and Medium Hydro	0	0
	Biomass/Waste-to-Energy	2	8.1
	Wave	1	20
	<b>Total</b>		<b>35</b>
Construction Permits issued	Solar	5	240
	Wind	1	150
	Small and Medium Hydro	0	0
	Biomass/Waste-to-Energy	1	0.1
	Wave	1	20
	<b>Total</b>		<b>8</b>



The list of the companies that have been granted construction permits as at 31<sup>st</sup> December, 2017 is presented below in Table 3:

No.	Name of Company	Plant Type	Capacity (MW)	Licence Number	Location of Plant
1.	BXC Company Ghana Ltd	Solar PV	20	EC/GWSL/08-13-021	Gomoa Onyadze, Central Region.
2.	Savanna Solar Ltd	Solar PV	150	EC/GWSL/04-13-008	Kusawgu, Central Gonja District; Northern Region.
3.	TFI Power Ltd	Solar PV	30	EC/GWSL/08-13-017	Mahe-Obom, Greater Accra Region.
4.	TC's Energy	Wave	20	EC/GWSL/08-13-023	Ada Foah, Greater Accra Region.
5.	Upwind Ayitepa Limited	Wind	150	EC/GWSL/02-14-037	Ayitepa, Greater Accra Region
6.	Safi Sana (Ghana) Limited	Waste-to-Energy	0.1	EC/GWSL/12-14-063	Ashaiman, Greater Accra Region.
7.	Meinergy Technology Limited	Solar PV	20	EC/GWSL/06-15-067	Gomoa Onyadze, Central Region
8.	Sun Investments Gh. Limited	Solar PV	20	EC/GWSL/08-13-016	Sege, Ada West District, Greater Accra Region

## 9. IMPORTATION, INSTALLATION AND MAINTENANCE LICENCES

Nineteen (19) Importation Licences were granted to companies for the importation of solar panels and accessories.

Seventy (70) Installation and Maintenance Licences were also granted to companies to install and maintain equipment for the supply of energy from renewable sources.

## 10. RENEWABLE ENERGY MASTER PLAN (REMP)

The Energy Commission developed the draft Renewable Energy Master Plan (REMP) and subjected it to a stakeholder review and sought inputs to finalise the document.

## 11. CHINA-GHANA RENEWABLE ENERGY TECHNOLOGY TRANSFER (RETT) PROJECT

In 2014, the Danish International Development Agency (DANIDA) approved the China-Ghana

Renewable Energy Technology Transfer (RETT) Project supported with funding from UNDP-Ghana and UNDP-China.

### Project Objectives

The specific Project Objective is: *To contribute to climate change mitigation and reduce poverty by increasing access to renewable energy solutions through enhanced investment and production of Renewable Energy Technologies (RET) in Ghana, within the framework of South-South Cooperation between Ghana and China.*

This objective will be achieved through the implementation of the following four key Outcomes:

1. Ghana has an enabling environment in place for the transfer, production and regulation of the use of Renewable Energy Technologies.
2. Access to and use of relevant Renewable Energy Technologies (RETs) increased in Ghana
3. China has strengthened capacity for South-South Cooperation in relation to RET transfer
4. Project management and coordination structures established

The project is part of UNDP's National Implementation Modality with Government of Ghana with the Energy Commission as the Implementing Partner. A Project Management Unit (PMU) has been established with office at the Commission and manned by a Project Coordinator and Project Assistant. A Project Steering Committee was constituted for the implementation of the Project by the Energy Commission.

Some of the key achievements of the projects in contributing to the outcome included:

- The development of the Renewable Energy Master Plan (REMP) which was completed by a technical taskforce after extensive stakeholder consultation. The plan presents RE generation capacity targets up to 2030 and outlines specific strategies to achieve the ambitions. The

Ministry will seek Parliamentary approval for the plan.

- The PMU published the “Baseline Study on Renewable Energy Projects in Ghana” in 2017. The document provides a comprehensive list of major Renewable Energy Projects in the country. Four hundred copies were printed and widely distributed to stakeholders in Government, Private Sector, Academia and Donor Partners. The document has gained wide acceptance as a reference material that helps project developers and other stakeholders to appreciate the efforts made so far and what remains to be done. This is expected to prevent duplication of efforts in the development of RE projects in Ghana.



**Figure 30:** First site meeting on the Tsatsadu mini-hydropower project. The Chief Executive of Bui Power Authority and the Executive Secretary of the Energy Commission in center of picture.

## ■ Demonstration Projects

- In 2017, the PMU commenced activities on the development of three demonstration projects. These included the development of a 45kW micro hydropower facility to showcase the technology and enable capacity building of Ghanaians. As part of the development process for the micro hydropower facility, the Energy Commission signed an MoU with China-based institution, International Centre for Small Hydropower to provide technical support to the local implementing partner, the Bui Power

Authority (BPA). In the last quarter of 2017, the project commenced the procurement of a 45 kW generator for the project mini-hydropower demonstration project.

- The other two demonstration projects were related to improved cooking and biogas technologies. The project used a set of criteria to select potential sites for deployment of the demonstration sites. This led to the identification of 10 second cycle schools in the Northern Region for the cookstove initiative, while six (6) sites, mostly animal farms, were selected to host the biogas demonstration.



Figure 31: BPA delegation at the Fengtan Hydropower Station, China

## HUMAN RESOURCE DEVELOPMENT AND ADMINISTRATION

### 1. TRAINING AND DEVELOPMENT

The Energy Commission is committed to training its staff to meet the requirements of its mandate. In the year under review, staff training with support from international partners and the Commission's own resources covered the following areas:

1. IEA Energy Efficiency for Lighting, Appliances and Equipment, Paris – France.
2. Monitoring and Evaluation for Results, Cape Town – South Africa.
3. Delivering on the Paris Agreement through South-South Cooperation: Policy Planning to Scale Clean Cooking in Vienna – Austria.
4. 2017 Clean Cooking Forum, Global Alliance for Clean Cookstoves in Delhi – India.
5. Sustainable Energy for All Forum, Lisbon – Portugal.
6. Administrative Writing Skills Programme, Civil Service Training Centre – Accra.
7. Training of Trainers and Public Service Delivery Improvement (PSDI), Head of Civil Service Training, Accra.
8. Project Monitoring and Evaluation, GIMPA – Accra.
9. Politics and Administration: “The Challenges of the Public Sector Human Resource Management Practitioners and the Way Forward”, Head of Civil Service Training, Accra.

### 2. COLLABORATION WITH NATIONAL AND INTERNATIONAL TERTIARY INSTITUTIONS

The Commission offers national and international students the opportunity for internship. Consequently, several students have built their capacity at the Energy Commission. In addition, relationship between the institutions and the Commission has been strengthened under the internship programme. In 2017, students from the following institutions had opportunities for internship at the Energy Commission:

1. University of Ghana, Legon, Accra - Ghana
2. Kwame Nkrumah University of Science & Technology, Kumasi – Ghana
3. University of Cape Coast – Ghana
4. University of Energy & Natural Resources, Sunyani – Ghana.
5. Central University, Prampram – Ghana
6. African Institute for Mathematical Science, Biriwa – Ghana
7. City University of London, London – UK

### 3. STAFF LEARNING FORA

Consistent with the Commission's needs and its drive to adopt best practices, an opportunity has been created for collaboration among cross-functional teams. Directorates take turns to share information on their work programmes and allow other staff to interrogate the presentations leading to a healthy discourse. Consequently, once a month staff meet for presentations and benefit from the synergy of

working with a diversity of experiences. These meetings strengthen the bond between Directorates and afford staff the opportunity to provide a cordial work environment and the feedback necessary for effective work.

#### 4. RECOGNITION AND AWARDS

1. The Commission recognizes the importance of motivating its staff and so instituted the Best Worker Award to reward hard working staff. In all, nine (9) staff were awarded for outstanding performance during the period under review:
  - a. The Best Worker, Mr. Julius Kwasi Nkansah-Nyarko, a Principal Programmes Officer of the Renewable Energy Directorate was awarded for his outstanding performance and successful organization of the 3<sup>rd</sup> Ghana Renewable Energy Fair.
  - b. Ms. Stephaine Yaa Adomaa Antwi was awarded for her role in raising funds for the Renewable Energy Fair.
  - c. Mr. Benjamin Essien of the Inspection and Enforcement Directorate was awarded for his hard work at the Tema port.
  - d. A team of five staff from the Renewable Energy Division was also awarded for its good performance in the

implementation of the National Rooftop Solar Programme.

2. In 2017, the Energy Commission was awarded the BEST ENERGY INSTITUTION OF THE YEAR – 2017 at the Ghana Energy Awards. The Executive Secretary, Dr. A. K. Oforu Ahenkorah also received an award for the ENERGY PERSONALITY OF THE YEAR – 2017.

#### 5. PROMOTING EMPLOYEE WELL-BEING

- a. Health, safety and wellness play an important role in keeping employees motivated and performing at an optimal level. In this regard, the Commission has continued to promote employee well-being by bringing gym services to its office premises for staff to exercise after work in order to keep fit, enhance productivity and reduce stress levels.
- b. During the year under review, a free-eye screening exercise was conducted for staff and their families. In addition, a well-stocked first-aid kit and a blood pressure monitor have been procured for use by staff to improve their well-being.

## PUBLIC ENGAGEMENT AND EDUCATION

### 1. ELECTRICAL WIRING CERTIFICATION PROGRAMME

Since the commencement of the implementation of the Electrical Wiring Regulations, 2011, L.I. 2008, close to 6,000 electricians have been certified as Certified Electrical Wiring Professionals (CEWPs) and Certified Electrical Wiring Inspectors (CEWIs). A database of these wiring professionals are available on the Commission's website at [www.energycom.gov.gh](http://www.energycom.gov.gh).

The public, particularly electricians, were sensitized through media announcements to register and sit for the electrical wiring examinations which are held twice in the year. A month-long session of announcements was made on radio on the opening and closing dates for registration of candidates and the benefits to be derived from being successful in the wiring examination. The impact of this was an increase in the number of candidates who registered for the examinations in the year 2017.

Feedback from the public education campaigns on the full implementation of the Electrical Wiring Regulation 2011 indicated that sanity had been restored to the Electrical Wiring industry. The profession has gained increased prestige and is recognised as one of the crafts in Ghana guided by a legislative instrument and certified by a regulatory body.

Two sessions of award ceremonies were organized in Accra, Kumasi and Tamale for successful candidates across the country and the media reported stories of the events on radio and in newspapers across the country.

The Commission organised stakeholder conferences in Koforidua, Sunyani, Kumasi and Accra during which opinion leaders and members of Assemblies, community councils, churches and mosques were educated by

officials from ECG, NEDCo, Ghana National Fire Service, Ghana Police Service, CEWPs, etc. to hire the services of ONLY electricians certified by the Commission to undertake internal wiring in all residential, commercial and industrial facilities.

The stakeholder meetings were preceded by studio appearances in radio stations within the various districts.

The Commission engaged Quick SMS Ghana and sent 100,000 SMS messages at random to clients on all mobile networks across the country and sensitized the general public on the need to hire only Certified Electrical Wiring Professionals (CEWPs) for all internal installations.

### 2. ENERGY EFFICIENCY CAMPAIGNS

The Commission again organized the distribution of about 10,000 energy efficiency flyers for basic school children in 34 basic schools in the Ga West Municipality. The Municipality had in the past facilitated a Cantata drama troupe to perform for the Commission in a nation-wide "Save a Watt" campaign in 2014.

One thousand "No Label No Good" energy efficiency stickers were distributed as part of a campaign embarked upon at some taxi and trotro stations in Accra and Tema. The Drivers were informed and educated to insist on energy efficient appliances on the Ghanaian markets.

The Commission engaged Quick SMS Ghana and sent 100,000 SMS messages at random to clients on all mobile networks across the country and sensitized the general public on the need to eliminate unnecessary energy use and waste.

Throughout the year, the process of placement of public notices in the national newspapers and advertorials in magazines such as the Corporate Guardian of the Commission's activities in relation to renewable energy were continued.





**ENERGY FUND**

# **FINANCIAL STATEMENTS**

FOR THE YEAR ENDED 31ST DECEMBER 2017

STATE ENTERPRISES AUDIT CORPORATION



# TABLE OF CONTENTS

## ENERGY COMMISSION ACCOUNTS FOR THE YEAR ENDED 31<sup>ST</sup> DECEMBER, 2017

	PAGE
Corporate information .....	1
Five-year financial summary and highlights .....	2
Report of the Governing Board .....	3
Corporate Governance (CG) report .....	5
Independent Auditor's report.....	6
Statement of financial position .....	10
Statement of receipts and disbursements .....	11
Statement of movement of equity .....	12
Statement of cash flows .....	13
Notes to the financial statements .....	14

## Corporate information for the year ended 31 December, 2017

### Governing Board

Prof. George Panyin Hagan	Chairman
Dari Bismark Haruna (Kpembewura)	Member
Dr. Isaac Frimpong Mensa-Bonsu	Member
Moses Aristophanes Kwame Gyasi	Member
Hon. Nana Akua Owusu Afriyie	Member
Alhaji Jabaru Abukari	Member
Eugene Ofosuhene	Member
Dr. Alfred Kwabena Ofosu Ahenkorah	Member

### Board Secretary

Ms. Cecilia Abgenyega  
Energy Commission  
GA-037-3212

### Principal place of business

Ghana Airways Avenue  
Behind Alliance Français  
Airport Residential Area  
GA-037-3212

### Registered office

PMB Ministries Post Office  
Accra

### Independent Auditor

James Quagraine Associates  
(Chartered Accountants)  
P. O. Box GP 3947  
Accra

### Bankers

Bank of Ghana  
Ecobank Ghana Limited

**Financial summary and highlights for the year ended 31 December, 2017**  
*(All amounts are stated in Ghana cedi unless otherwise stated)*

	2017	2016	2015	2014	2013
<b>Five-year financial summary and highlights</b>					
Receipts	36,294,934	37,292,081	15,501,805	10,167,086	6,267,409
Disbursements	34,871,901	31,810,135	12,316,657	9,738,722	6,649,201
Excess of receipts over disbursement	1,423,033	5,481,946	3,185,148	438,318	(381,792)
Bank balance	357,749	1,522,863	167,255	512,892	84,578
Trade and other receivables	10,143,508	7,555,361	4,079,403	-	-
Trade and other payables	-	-	548,618	-	-
Energy fund	10,501,257	9,078,224	3,698,040	512,892	84,578

<b>Financial highlights</b>	2017	2016	Percentage change (%)
Receipts	36,294,934	37,292,081	-2.67%
Disbursements	34,871,901	31,810,135	9.63%
Excess of receipts over disbursement	1,423,033	5,481,946	-74.04%
Bank balance	357,749	1,522,863	-76.51%
Trade and other receivables	10,143,508	7,555,361	34.26%
Trade and other payables	-	-	-
Energy fund	10,501,257	9,078,224	15.68%

## Report of the Governing Board of the Energy Fund

The Directors are pleased to submit the annual report to the members of the Energy Fund (Fund) together with the audited financial statements of the Fund for the year ended 31 December, 2017.

### Principal activities

The principal activities of the Fund are mandated under Section 42 of the Energy Commission Act 1997, (Act 541) as amended are;

- Promotion of energy efficiency and productive uses of electricity and natural gas and petroleum products;
  - Promotion of projects for the development and utilization of renewable energy resources, including solar energy;
  - Human resource development in the energy sector;
  - Local content and local participation development in the energy sector;
  - Any other relevant purposes as may be determined by the Energy Fund.
- i. In addition, the Fund shall be managed and administered by the Energy Commission (Commission) which shall for this purpose include the Controller and Accountant-General or his representative
  - ii. All monies for the Fund shall be paid into a bank account for the purpose opened by the Commission with the approval of the Controller and Accountant-General
  - iii. The provisions under sections 49 and 50 of the Energy Commission Act on accounts and audit and annual report shall apply to the Fund

### Financial results

**GHS**

During the year under review releases by the Controller and Accountant General's Department from the Petroleum Levy Account into the Energy Fund account held at the Bank of Ghana amounted to	23,726,357
- Added to this were the following sources of revenue:	
- Fees from permits and licenses	11,331,573
- Electrical Demand Management Fund (EDMF) Project Fund	1,000,000
- Other income	<u>237,005</u>
Total inflow for the year amounted to	36,294,935
Add balance at 1 January, 2017 on Energy Fund	<u>9,078,224</u>
Total amount available for disbursement in the year	45,373,159
Deduct disbursement in the year amount to	<u>(34,871,902)</u>
Balance carried forward on the Energy Fund account at 31 December, 2017	<u>10,501,257</u>

### Auditors

In accordance with Energy Commission Act 1997, (Act 541), James Quagraine Associates (Chartered Accountants) may be authorised to continue in office as the Fund's auditors.

## ENERGY FUND

### Report of the Governing Board (Continued)

#### Directors' responsibilities in respect of the Financial Statements

The Governing Board of Directors (Governing Board) are required to ensure that adequate accounting records are maintained so as to disclose at reasonable adequacy, the financial position of the Energy Fund (Fund). They are also responsible for steps to safeguard the assets of the Fund and to prevent and detect fraud and other irregularities. They must present financial statements for each financial year, which give a true and fair view of the affairs of the Fund, and the results for that period. In preparing these Financial Statements, we are required to:

- select suitable accounting policies and apply them on a consistent basis using reasonable and prudent judgement
- state whether or not the Generally Accepted Accounting Principles (GAAP) have been adhered to and explain material departures thereto
- use the going concern basis unless it is inappropriate.

The Governing Board acknowledges its responsibility for ensuring the preparation of the Annual Financial Statements in accordance with GAAP and the responsibility of external auditors to report on these financial statements. The Governing Board is responsible for ensuring the maintenance of adequate accounting records and an effective system of internal controls and risk management.

Nothing has come to the Governing Board's attention, to indicate any material breakdown in the functioning of the internal controls and systems during the period under review, which could have a material impact on the business.

The Financial Statements are prepared from the accounting records on the basis of consistent use of appropriate records supported by reasonable and prudent judgements and estimates that fairly present the state of affairs of the Fund. The Financial Statements have been prepared on a going concern basis and there is no reason to believe that the Fund will not continue as a going concern in the next financial year. The Governing Board confirms that in preparing the financial statements, they have:

- selected suitable accounting policies and applied them consistently
- made judgements and estimates that are reasonable and prudent
- following the Generally Accepted Accounting Principles (GAAP)
- prepared the financial statements on the going concern basis

The Governing Board is responsible for keeping proper accounting which disclose with reasonable accuracy at any time the financial position of the Fund. They are also responsible for safe guarding the assets of the Fund and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

### Corporate Governance (CG) report

The Energy Commission (Commission) is committed to strong corporate governance practices that allocate rights and responsibilities in managing the Energy Fund (Fund). The Governing Board and Executive Management are to provide an effective oversight and management of the Fund in a manner that enhances shareholder value and promotes investors' confidence. The Commission's corporate governance principles are contained in a number of corporate documents. The Governing Board oversees the conduct of the Fund's business and is primarily responsible for providing effective governance over the Fund's key affairs, including the appointment of Executive Management, approval of business strategies, evaluation of performance and assessment of major risks facing the Fund. In discharging its obligations, the Governing Board exercises judgement in the best interest of the Fund, relies on the Commission's Executive Management to implement approved business strategies, resolve day-to-day operational issues, keep the Governing Board informed, and maintain and promote high ethical standards. The Governing Board delegates authority in management matters to the Executive Management subject to clear instructions. It is upon such delegation of authority and circumstances that the Executive Management shall be required to obtain Governing Board approval prior to taking a decision on behalf of the Fund. The Governing Board is made up of majority Non-Executive Directors.

The Commission's commitment to ensuring international best practice in terms of Corporate Governance remains strong and unwavering.

Name of Chairman: .....

Name of Executive Secretary: .....

Signature:.....

Signature:.....

Date: .....

Date:.....

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0275111553  
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North Ablekuma Municipal Assembly  
No. 5 Otobia Link  
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OTATEN, ODORKOR  
Accra - Ghana  
E-mail:regthompson1955@yahoo.com



**James Quagraine Associates**

Chartered Accountants and  
Management Consultants

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**Independent Auditor's report  
to the members of  
the Governing Board**

**Report on the audited financial statements**

**Opinion**

We have audited the accompanying financial statements of the Energy Fund for the year ended 31 December, 2017. The financial statements comprise:

- Statement of financial position as at 31 December, 2017
- Statement of financial performance for the year ended;
- Statement of changes in equity for the year ended;
- Statement of cash flows for the year then ended; and
- The notes to the financial statements, which include a summary of significant accounting policies

In our opinion, the accompanying financial statements give a true and fair view of the financial position of the Energy Fund as at December 31, 2017, and of its financial performance and cash flows for the year then ended in accordance with Generally Accepted Accounting Principles (GAAP) and in the manner required by the Energy Commission Act, 1997 (Act 541).

**Independence**

We are independent of the Energy Fund in accordance with the International Ethics Standards Board for Accountants' *Code of Ethics for Professional Accountants (IESBA Code)* together with the ethical requirements that are relevant to our audit of the financial statements, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the IESBA Code.

## Report on the audited financial statements (continued)

### Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matters	How our audit addressed the matter
The financial statements for the year ended 31 December, 2017 have not been converted to meet the requirements of International Public Sector Accounting Standards (IPSAS).	We have advised the Energy Commission to dedicate the necessary resources to ensure that IPSAS implementation is completed in a timely fashion so as to meet the timeline roadmap mandated by the Government of Ghana.

### Information other than the financial statements and auditor's report thereon

Management is responsible for the other information. The other information comprises the sections on corporate information, financial summary and highlights, report of the Governing Board and Corporate Governance (CG) report.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information we are required to report that fact. We have nothing to report in this regard.

### Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with GAAP and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

**Those charged with governance are responsible for overseeing the Company's financial reporting process.**



## Report on the audited financial statements (continued)

### Auditor's Responsibilities for the Audit of the Financial Statements

The objectives of our audit are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

**As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:**

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error; design and perform audit procedures responsive to those risks; and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Energy Fund's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Energy Fund's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Energy Fund to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the Energy Fund to express an opinion on the financial statements. We are responsible for the direction, supervision and performance of the audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

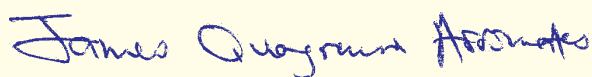
### Report on Other Legal and Regulatory Requirements

*Compliance with the requirements of Section 49 and 50 of the Energy Commission Act 1997 (Act 541) of Ghana*

In carrying out our audit we consider and report on the following matters. We confirm that:

- i) We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit
- ii) In our opinion, proper books of account have been kept by the Energy Fund, so far as appears from our examination of those books; and
- iii) The Energy Fund's statement of financial position and Energy Fund's profit and income statement are in agreement with the books of account.

In accordance with the relevant section of the Energy Commission Act, 1997 (Act 541), the Commission has kept accounting records that are sufficient to explain its transactions and financial position with respect to business.



Signed by: **ANTHONY G. NEEQUAYE**  
(ICAG/P/1462)

For and on behalf of:

**JAMES QUAGRAINE ASSOCIATES**  
**CHARTERED ACCOUNTANTS**  
**P. O. Box GP 3947**  
**Accra**  
(ICAG/F/2019/184)

Dated.....Day of .....2018

Accra, Ghana

**ENERGY FUND  
FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**

**Statement of financial position**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

		<b>As at 31 December</b>	
	<b>Note</b>	<b>2017</b>	<b>2016</b>
<b>Current Assets</b>			
Trade and other accounts receivables	3	10,143,508	7,555,361
Cash and cash equivalents	4	<u>357,749</u>	<u>1,522,863</u>
<b>Total assets</b>		<b><u>10,501,257</u></b>	<b><u>9,078,224</u></b>
<b>Equity</b>			
Accumulated Energy Fund account		<u>10,501,257</u>	<u>9,078,224</u>
<b>Total equity and liabilities</b>		<b><u>10,501,257</u></b>	<b><u>9,078,224</u></b>

**APPROVAL OF THE FINANCIAL STATEMENTS**

The financial statements of the Energy Fund were approved by the Governing Board and signed on their behalf by

Name of Chairman: ..... Name of Executive Secretary: .....

Signature:..... Signature:.....

Date: ..... Date: .....

The accompanying notes on pages 14 to 18 form an integral part of these financial statements.

## ENERGY FUND FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017

### Statement of receipts and disbursements

(All amounts are stated in Ghana cedi unless otherwise stated)

Receipts for the year	Note	For the year ended 31 December	
		2017	2016
Releases by Controller and Accountant General's Department from petroleum levy		23,726,357	25,044,776
Fees from permits	5	11,331,573	11,935,052
Electrical Demand Management Fund (EDMF) project fund		1,000,000	300,000
Other income	6	<u>237,005</u>	<u>12,253</u>
<b>Total receipts for the year</b>		<b><u>36,294,935</u></b>	<b><u>37,292,081</u></b>
<b>Disbursements in the year</b>			
Promotion of energy efficiency and productive use of electricity and natural gas	7	2,777,000	1,700,593
Human resource development in the energy sector		5,177,725	6,625,590
Promotion of projects for the development of and utilisation of Renewable Energy Resources, including solar energy		4,772,461	2,938,425
Any other relevant expenditures approved by the board	8	21,244,077	20,243,261
Local content and local participation for EDMF- Refrigerator rebate and capacitor banks		900,000	300,000
Bank charges		<u>639</u>	<u>2,265</u>
<b>Total disbursements for the year</b>		<b><u>34,871,902</u></b>	<b><u>31,810,135</u></b>
<b>Excess of receipts over disbursements</b>		<b><u>1,423,033</u></b>	<b><u>5,481,946</u></b>

The accompanying notes on pages 14 to 18 form an integral part of these financial statements.

**ENERGY FUND**  
**FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**

**Statement of movement of equity**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

	For the year ended December	
	2017	2016
Resources		
Equity balance on 1 January	9,078,224	3,596,278
<b>Receipts and disbursements for the year</b>		
Receipts during the year	36,294,935	37,292,081
Disbursements during the year	<u>(34,871,902)</u>	<u>(31,810,135)</u>
Excess of receipts over disbursements during the year	1,423,033	5,481,946
Equity balance on 31 December	<b><u>10,501,257</u></b>	<b><u>9,078,224</u></b>

The accompanying notes on pages 14 to 18 form an integral part of these financial statements.

**ENERGY FUND**  
**FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**

**Statement of cash flows**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

	<b>For the year ended December</b>		
	<b>Note</b>	<b>2017</b>	<b>2016</b>
<b>Cash flows from operations</b>			
Excess of receipts over disbursements		1,423,033	5,481,946
Prior year adjustment		-	(101,762)
<b>Changes in working capital</b>			
Increase in trade and other accounts receivables		(2,588,147)	(3,475,958)
Decrease in accounts payables		<u>-</u>	<u>(548,618)</u>
<b>Net cash (used in) / provided from operations</b>		<b>(1,165,114)</b>	<b>1,355,608</b>
<b>Cash flow from investing activities</b>		<u>-</u>	<u>-</u>
<b>Cash flow from financing activities</b>		<u>-</u>	<u>-</u>
<b>Net (decrease) / increase in cash &amp; cash equivalents</b>		<b><u>(1,165,114)</u></b>	<b><u>1,355,608</u></b>
<b>Cash and cash equivalents:</b>			
At the beginning of the year		<u>1,522,863</u>	<u>167,255</u>
At the end of the year	<b>4</b>	<b><u>357,749</u></b>	<b><u>1,522,863</u></b>

The accompanying notes on pages 14 to 18 form an integral part of these financial statements.

## **ENERGY FUND FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**

### **Notes to the financial statements (All amounts are stated in Ghana cedi unless otherwise stated)**

#### **1. Reporting entity**

The Energy fund (Fund) is an establishment under section 41 of the Energy Commission Act, 1997 (Act 541). The resources of money for the fund are as follows:

- such proportion of Government levy on petroleum products, electricity and natural gas as may be determined by the Cabinet and approved by Parliament (CAGD releases);
- money that accrues to the Commission in the performance of its functions (Fees from permits); and
- grants.

#### **Objective of the Fund**

The objects of the fund (section 42 of the Energy Commission Act, 1997 Act 541) include the following:

- promotion of energy efficiency and product use of electricity, natural gas and petroleum products;
- promotion of projects for the development and utilization of renewable energy resources including solar energy;
- human resource development of the energy sector;
- local content and local participation development in the energy sector;
- such other relevant purposes as may be determined by the Fund.

#### **Purpose of the financial statements**

The financial statements have prepared to provide financial information to the Auditor-General. As a result the financial statements may not be suitable for another purpose.

#### **2. Basis of preparation and summary of significant accounting policies**

##### **2.1 Statement of compliance and presentation of financial statements**

The financial statements of Energy Fund ended 31st December, 2017 have been prepared in accordance with Generally Accepted Accounting Principles (GAAP) and in the manner required by the Energy Commission Act, 1997 (Act 541). The financial statements have been prepared to provide financial information to the Energy Commission and the Auditor-General. As a result, the financial statements may not be suitable for any other purpose.

##### **2.2 Basis of measurement and accounting**

The measurement basis applied is the historical cost basis convention.

## ENERGY FUND FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017

### Notes to the financial statements (continued)

*(All amounts are stated in Ghana cedi unless otherwise stated)*

#### 2.3 Foreign currency translation

##### (i) Functional and presentation currency

Items included in the financial statements are measured using the currency of the primary economic environment in which the entity operates ('the functional currency') Ghana Cedi. The financial statements are presented in Ghana Cedis.

##### (ii) Transactions and balances

Transactions denominated in foreign currencies are recorded in the functional currency using the exchange rates prevailing at the date of the transactions. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency rate of exchange ruling at the reporting date. Foreign exchange gains and losses resulting from the settlement of foreign currency transactions and from the foreign currency differences arising on retranslation are generally recognized in profit or loss.

#### 2.4 Revenue recognition

Revenue is recognised to the extent that the economic benefits that flow to the Fund and the revenue can be reliably measured. The following specific recognition criteria applied in revenue can be reliably measured. The following specific recognition criteria apply in revenue recognition:

- i. Transfers from the Petroleum Levy Account into the Energy fund account by Controller and Accountant General's Department once cash is received.
- ii. Fees from Permits and Licenses once the licensees are billed on their anniversary for the current year.
- iii. EDMF project funds and other income once cash is received.

#### 2.5 Cash and cash equivalents

Cash and cash equivalents are recorded in the statement of financial position at cost. For the purpose of the cash flow statement, cash and cash equivalents comprise cash on hand, demand deposits and other short-term highly liquid investments that are readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value and bank overdraft.

#### 2.6 Trade and other receivables

Trade and other receivables are recognized initially at fair value, and are subsequently measured at amortized cost using the effective interest rate method. Bulk customers are those consumers of electricity with a maximum demand of at least 500 kVA consistently for a consecutive period of 3 months or a minimum annual energy consumption of 1 million kilowatt-hours (kWh).



## ENERGY FUND FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017

### Notes to the financial statements (continued)

(All amounts are stated in Ghana cedi unless otherwise stated)

#### 2.7 Trades and other payables

Trade and other payables are recognised initially at fair value and subsequently at amortised cost, using the effective interest rate method.

<b>3. Trade and other receivables</b>	<b>2017</b>	<b>2016</b>
Annual operating license fees	9,902,216	6,934,648
Bulk customers	<u>241,292</u>	<u>620,713</u>
	<b><u>10,143,508</u></b>	<b><u>7,555,361</u></b>

<b>4. Cash and cash equivalents</b>	<b>2017</b>	<b>2016</b>
Bank of Ghana	246,720	1,494,738
Ecobank Limited (forex)	<u>111,029</u>	<u>28,125</u>
	<b><u>357,749</u></b>	<b><u>1,522,863</u></b>

<b>5. Receipts – Permits and licenses</b>	<b>2017</b>	<b>2016</b>
Permits	4,071,858	1,293,858
Annual operating fees	6,342,878	9,254,216
Enforcement fees	138,000	61,000
Sale of license manual	350	690
Wind data	7,920	17,600
Siting permits	147,500	218,046
License fees	205,390	115,320
Application	<u>417,677</u>	<u>874,322</u>
	<b><u>11,331,573</u></b>	<b><u>11,935,052</u></b>

**ENERGY FUND**  
**FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**

**Notes to the financial statements (continued)**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

<b>6. Other income</b>	<b>2017</b>	<b>2016</b>
Exchange gain	2,862	12,253
International donor support	141,943	-
Other income	<u>92,200</u>	<u>-</u>
	<b><u>237,005</u></b>	<b><u>12,253</u></b>

<b>7. Promotion of Energy Efficiency and productive uses of electricity</b>	<b>2017</b>	<b>2016</b>
Energy efficiency, conservation and climate change	2,047,000	1,300,482
Strategic planning and policy development	-	13,169
Social and environmental impact assessment	-	50,000
Technical regulation	730,000	266,943
Inspectorate	<u>-</u>	<u>70,000</u>
	<b><u>2,777,000</u></b>	<b><u>1,700,594</u></b>

<b>8. Other relevant expenditure approved by the Board</b>	<b>2017</b>	<b>2016</b>
International co-operation	1,268,261	1,540,971
Capital work in progress-new office building	1,775,000	1,300,000
Procurement of official vehicles and office equipment	400,000	1,590,924
Sundries/Staff Compensations	17,300,816	14,924,728
Electrical wiring regulation	<u>500,000</u>	<u>886,638</u>
	<b><u>21,244,077</u></b>	<b><u>20,243,261</u></b>

## **ENERGY FUND FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**

### **Notes to the financial statements (continued)**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

#### **9. Events after year end**

The fund adjusted the amounts recognised in its financial statement to reflect events that provide further evidence of conditions that existed at the statement of financial position dates.

Where there are material events that are indicative of conditions that arose after the statement of financial position date, the Fund discloses them by way of note, the nature of the event and estimate of its financial effect or a statement that such an estimate cannot be made. The Fund had no material subsequent events that required adjustment to or disclosure in the financial statements.

#### **10. Contingent liabilities and capital commitments**

There were no contingents assets, contingent liabilities or capital commitments as at 31 December, 2017 (2016: Nil)

#### **11. Related party transactions**

##### ***(a) Transactions with Executive Directors and key management personnel***

Key management personnel are defined as those persons having authority and responsibility for planning, directing and controlling the activities of the Commission (directly or indirectly) and comprise the Directors and Senior Management of the Commission. There were no material transactions with companies in which a Director or other members of key management personnel (or any connected person) is related.



***ENERGY COMMISSION***

***FINANCIAL  
STATEMENTS***

FOR THE YEAR ENDED 31ST DECEMBER 2017

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STATE ENTERPRISES AUDIT CORPORATION

# TABLE OF CONTENTS

## ENERGY FUND FINANCIAL STATEMENTS FOR THE YEAR ENDED 31<sup>ST</sup> DECEMBER, 2017

	PAGE
Corporate information	1
Five year financial summary and highlights	2
Report of the Governing Board	3
Corporate Governance (CG) Report	5
Independent Auditor's Report	6
Statement of Financial position	10
Statement of Financial performance	11
Statement of changes in equity	12
Statement of cash flows	13
Notes to the Financial statements	14

## ENERGY COMMISSION

### Corporate information for the year ended 31 December, 2017

#### Governing Board

Prof. George Panyin Hagan	Chairman
Dari Bismark Haruna (Kpembewura)	Member
Dr. Isaac Frimpong Mensa-Bonsu	Member
Moses Aristophanes Kwame Gyasi	Member
Hon. Nana Akua Owusu Afriyie	Member
Alhaji Jabaru Abukari	Member
Eugene Ofosuhene	Member
Dr. Alfred Kwabena Ofosu Ahenkorah	Member

#### Board Secretary

Ms. Cecilia Abgenyega  
Energy Commission  
GA-037-3212

#### Principal place of business

Ghana Airways Avenue  
Behind Alliance Français  
Airport Residential Area  
GA-037-3212

#### Registered office

PMB Ministries Post Office  
Accra

#### Independent Auditor

James Quagraine Associates  
(Chartered Accountants)  
P. O. Box GP 3947  
Accra

#### Bankers

Bank of Ghana  
Ecobank Ghana Limited

## ENERGY COMMISSION

### Five year financial summary and highlights for the year ended 31 December, 2017

(All amounts are in Ghana cedis unless otherwise stated)

Five year financial summary	Restated				
	2017	2016	2015	2014	2013
Income	39,879,068	35,402,608	18,039,152	13,413,441	10,101,460
Expenditure	35,327,027	31,669,302	15,709,693	12,297,692	8,590,548
Excess of income over expenditure	4,552,041	3,733,306	2,329,459	1,115,749	1,510,912
Total assets	29,552,287	24,651,353	19,979,188	12,455,620	6,487,271
Total equity	24,207,983	19,655,942	15,922,637	9,590,552	3,774,069
Total liabilities	5,314,304	4,995,411	4,056,551	2,865,068	2,713,202

Financial highlights	Restated		Percentage change (%)
	2017	2016	
Income	39,879,068	35,402,608	12.64%
Expenditure	35,327,027	31,669,302	11.55%
Excess of income over expenditure	4,552,041	3,733,306	21.93%
Total assets	29,552,287	24,651,353	19.88%
Total equity	24,207,983	19,655,942	23.16%
Total liabilities	5,314,304	4,995,411	6.38%

## Report of the Governing Board

### To the members of Energy Commission

The Governing Board of Directors are pleased to submit the annual report to the members of the Commission together with the audited financial statements of the Commission for the year ended 31 December, 2017.

#### Principal activity

The principal activity of the Commission is mandated under the Energy Commission Act 1997, (Act 541) which is:

- To manage the utilization of energy resources in Ghana, to provide the legal, regulatory and supervisory framework for all providers of energy services in the country: specifically by the granting of licenses for the transmission, wholesale supply, distribution and sale of electricity and natural gas and related matters. There was no change in the nature of the business during the year.

#### Financial results for the year

	<b>2017</b>	<b>Restated 2016</b>
The Commission recorded excess income over expenditure of	4,552,041	3,733,306
Adding beginning balance of equity brought forward of	<u>19,655,942</u>	<u>15,922,637</u>
Leaving a balance on equity carried forward of	<u><b>24,207,983</b></u>	<u><b>19,655,942</b></u>

#### Auditors

In accordance with the Energy Commission Act 1997, (Act 541), James Quargraine Associates (Chartered Accountants) will continue in office as the Commission's auditors.

#### APPROVAL OF THE FINANCIAL STATEMENTS

The financial statements of Energy Commission, were approved by the Governing Board on and signed on their behalf by

Name of Chairman: .....

Name of Executive Secretary: .....

Signature:.....

Signature:.....

Date: .....

Date: .....



## ENERGY COMMISSION

### Report of the Governing Board (Continued)

#### Directors' responsibilities in respect of the financial statements

The Governing Board of Directors are required to ensure that adequate accounting records are kept and maintained so as to disclose any reasonable inadequacy and support the financial position of the Commission. They are also responsible for steps to safeguard the Commission's assets and to prevent and detect fraud and other irregularities. They must present financial statement for each financial year, which gives a true and fair view of the affairs of the Commission, and the results for that period. In preparing these financial statements, they are required to:

- select suitable accounting policies and apply them on a consistent basis using reasonable and prudent judgement;
- state whether or not the Generally Accepted Accounting Principles (GAAP) have been adhered to and explain material departures thereto;
- use the going concern basis unless it is inappropriate.

The Board acknowledges its responsibility for ensuring the preparation of the annual financial statements in accordance with GAAP and the responsibility of external auditors to report on these financial statements. The Board is responsible for ensuring the maintenance of adequate accounting records and an effective system of internal controls and risk management.

Nothing has come to the Board's attention to indicate any material breakdown in the functioning of the internal controls and systems during the period under review, which could have a material impact on the business.

The financial statements are prepared from the accounting records on the basis of consistent use of appropriate records supported by reasonable and prudent judgements and estimated that fairly present the state of affairs of the Commission. The financial statements have been prepared on a going concern basis and there is no reason to believe that the Commission will not continue as a going concern in the next financial year. The Directors confirm that in preparing the financial statement, they have:

- Selected suitable accounting policies and applied them consistently.
- Made judgements and estimates that are reasonable and prudent.
- Followed the Generally Accepted Accounting Principles (GAAP)
- Prepared the financial statements on the going concern basis.

The directors are responsible for keeping proper accounting records which disclose with reasonable accuracy at any time the financial position of the Commission and to enable them ensure that the financial statements comply with the Energy Commission Act, 1997 (Act 541). They are also responsible for safe guarding the assets of the Commission and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

#### By order of the Board:

Name of Chairman: .....

Name of Executive Secretary: .....

Signature:.....

Signature:.....

Date: .....

Date: .....

### Corporate Governance (CG) report

The Energy Commission is committed to strong corporate governance practices that allocate rights and responsibilities among the Commission’s members, the Board and Executive Management to provide an effective oversight and management of the Commission in a manner that enhances shareholders value and promotes investors’ confidence. The Commission’s corporate governance principles are contained in a number of corporate documents. The Board oversees the conduct of the Commission’s business and is primarily responsible for providing effective governance over the Commission’s key affairs, including the appointment of Executive management, approval of business strategies, and evaluation of performance and assessment of major risks facing the Commission. In discharging its obligations, the Board exercises judgement in the best interest of the Commission and relies on the Commission’s Executive management to implement approved business strategies, resolve day-to-day operational issues, keep the Board informed, and maintain and promote high ethical standards. The Board delegates authority in management matters to the Commission’s Executive Management subject to clear instructions in relation to such delegation of authority and the circumstances in which Executive Management shall be required to obtain Board approval prior to taking a decision on behalf of the Commission. The Board is made up of majority Non-Executive Directors.

Energy Commission’s commitment to ensuring international best practice in terms of corporate Governance remains strong and unwavering.

**Name of Chairman:** ..... **Name of Executive Secretary** .....

**Signature:** ..... **Signature:** .....

**Date:**..... **Date:**.....

P.O.Box GP . 3947  
Tel: 0244047517, 0209774077, 0275111553  
Diagonally Opposite  
North Ablekuma Municipal Assembly  
No. 5 Otobia Link  
Off Owusu Kofi Street,  
OTATEN, ODORKOR  
Accra - Ghana  
E-mail:regthompson1955@yahoo.com



**James Quagraine Associates**

Chartered Accountants  
and  
Management Consultants

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**Independent Auditor's report  
to the members of  
the Governing Board**

**Report on the audited financial statements**

**Opinion**

We have audited the accompanying financial statements of the Energy Commission for the year ended 31 December, 2017. The financial statements comprise:

- Statement of financial position as at 31 December, 2017
- Statement of financial performance for the year ended;
- Statement of changes in equity for the year ended;
- Statement of cash flows for the year then ended; and
- The notes to the financial statements, which include a summary of significant accounting policies

In our opinion, the accompanying financial statements give a true and fair view of the financial position of the Energy Commission as at December 31, 2017, and of its financial performance and cash flows for the year then ended in accordance with Generally Accepted Accounting Principles (GAAP) and in the manner required by the Energy Commission Act, 1997 (Act 541).

**Basis for Opinion**

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

**Emphasis of Matter - Basis of accounting and Restriction of Use**

We draw attention to Notes 2 and 3 to the financial statements which describe the basis of accounting. These financial statements have been prepared to provide financial information for the Auditor-General and the Energy Commission. As a result, these financial statements may not be suitable for another purpose. Our report is intended solely for the Auditor-General and Energy Commission. Our opinion is not modified in respect of this matter.

**Independence**

We are independent of the Energy Commission in accordance with the International Ethics Standards Board for Accountants' *Code of Ethics for Professional Accountants (IESBA Code)* together with the ethical requirements that are relevant to our audit of the financial statements, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the IESBA Code.

## Report on the audited financial statements (continued)

### Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matters	How our audit addressed the matter
The financial statements for the year ended 31 December, 2017 have not been converted to meet the requirements of International Public Sector Accounting Standards (IPSAS) as contained in the Terms of Reference that is attached to the appointment letter from the office of the Auditor-General.	We have advised the Energy Commission to not only request for an extension of the deadline, but also dedicate the necessary resources to ensure that IPSAS implementation is completed as soon as possible.

### Information other than the financial statements and auditor's report thereon

Management is responsible for the other information. The other information comprises the sections on corporate information, five-year financial summary and highlights, report of the Governing Board and Corporate Governance (CG) report.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information we are required to report that fact. We have nothing to report in this regard.

### Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with GAAP and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

## Report on the audited financial statements (continued)

### Auditor's Responsibilities for the Audit of the Financial Statements

The objectives of our audit are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of the audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Commission's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Commission's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Commission to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the Commission to express an opinion on the financial statements. We are responsible for the direction, supervision and performance of the audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

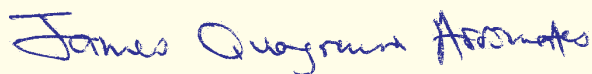
### Report on Other Legal and Regulatory Requirements

*Compliance with the requirements of Section 49 and 50 of the Energy Commission Act 1997 (Act 541) of Ghana*

In carrying out our audit we consider and report on the following matters. We confirm that:

- i) We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit
- ii) In our opinion, proper books of account have been kept by the Commission, so far as appears from our examination of those books; and
- iii) The Commission's statement of financial position and Commission's profit and income statement are in agreement with the books of account.

In accordance with the relevant section of the Energy Commission Act, 1997 (Act 541), the Commission has kept accounting records that are sufficient to explain its transactions and financial position with respect to business.



Signed by: ANTHONY G. NEEQUAYE  
(ICAG/P/1462)

For and on behalf of:  
JAMES QUAGRAINE ASSOCIATES  
CHARTERED ACCOUNTANTS  
P. O. Box GP 3947  
Accra  
(ICAG/F/2018/184)

Dated.....Day of.....2018

Accra, Ghana

**ENERGY COMMISSION  
FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**

**Statement of financial position**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

		<b>As at 31 December</b>	
	<b>Note</b>	<b>2017</b>	<b>Restated 2016</b>
<b>Assets</b>			
<b>Non-current assets</b>			
Property and equipment	4	<u>8,954,146</u>	<u>8,681,154</u>
<b>Current Assets</b>			
Inventory	5	128,118	25,001
Trade and other accounts receivables	6	18,951,031	15,890,016
Cash and cash equivalents	7.1	<u>1,488,992</u>	<u>55,182</u>
Total Current Assets		<u>20,568,141</u>	<u>15,970,199</u>
<b>Total assets</b>		<b><u>29,522,287</u></b>	<b><u>24,651,353</u></b>
<b>Equity</b>			
Accumulated Fund		24,207,983	16,752,297
Capital grants	10	-	2,415,315
Special Fund	11	<u>-</u>	<u>488,330</u>
<b>Total equity</b>		<u>24,207,983</u>	<u>19,655,942</u>
<b>Non-current liabilities</b>			
Medium term loan	9	<u>-</u>	<u>742,560</u>
<b>Current liabilities</b>			
Trade and other accounts payables	8	5,314,304	4,252,851
		<u>-</u>	<u>-</u>
<b>Total current liabilities</b>		<u>5,314,304</u>	<u>4,252,851</u>
<b>Total liabilities</b>		<u>5,314,304</u>	<u>4,995,411</u>
<b>Total equity and liabilities</b>		<b><u>29,522,287</u></b>	<b><u>24,651,353</u></b>

*The accompanying notes on pages 14 – 29 form an integral part of these financial statements.*

**APPROVAL OF THE FINANCIAL STATEMENTS**

The financial statements of Energy Commission, were approved by the Governing Board on ....., 2018 and signed on their behalf by

Name of Chairman: .....

Name of Executive Secretary: .....

Signature:.....

Signature:.....

Date: .....

Date: .....

**ENERGY COMMISSION  
FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**

**Statement of financial performance**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

<b>Income</b>	<b>Note</b>	<b>For the year ended 31 December</b>	
		<b>2017</b>	<b>Restated 2016</b>
Revenue	12	39,208,979	34,382,199
Other revenue	13	<u>670,089</u>	<u>1,020,408</u>
Total income		<u>39,879,068</u>	<u>35,402,608</u>
<b>Expenditure</b>			
Personnel emoluments	14	(12,255,873)	(10,011,826)
General and administrative expenses	15	(6,161,984)	(5,423,908)
Service activity expenses	16	<u>(16,909,170)</u>	<u>(16,233,568)</u>
		<u>(35,327,027)</u>	<u>(31,669,302)</u>
<b>Excess of income over expenditure transferred to accumulated fund</b>		<b><u>4,552,041</u></b>	<b><u>3,733,306</u></b>

*The accompanying notes on pages 14 – 29 form an integral part of these financial statements.*



**ENERGY COMMISSION  
FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**

**Statement of changes in equity**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

<b>For the year ended 31 December, 2017</b>	<b>Accumulated fund</b>	<b>Capital grant</b>	<b>Special fund</b>	<b>Total equity</b>
At beginning of the year, restated	16,752,297	2,415,315	488,330	19,655,942
Surplus for the year	4,552,041	-	-	4,552,041
Transfer	<u>2,903,645</u>	<u>(2,415,315)</u>	<u>(488,330)</u>	<u>-</u>
<b>At the end of the year</b>	<b><u>24,207,983</u></b>	<b><u>-</u></b>	<b><u>-</u></b>	<b><u>24,207,983</u></b>

<b>For the year ended 31 December, 2016</b>	<b>Accumulated fund</b>	<b>Capital grant</b>	<b>Special fund</b>	<b>Total equity</b>
At beginning of the year	13,018,992	2,415,315	488,330	15,922,637
Surplus for the year as originally reported	8,524,623	-	-	8,524,623
Net effect of correction of error	<u>(4,791,318)</u>	<u>-</u>	<u>-</u>	<u>(4,791,318)</u>
<b>At the end of the year, restated</b>	<b><u>16,752,297</u></b>	<b><u>2,415,315</u></b>	<b><u>488,330</u></b>	<b><u>19,655,942</u></b>

*The accompanying notes on pages 14 – 29 form an integral part of these financial statements.*

**ENERGY COMMISSION  
FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**

**Statement of cash flows**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

		<b>For the year ended 31 December</b>	
	<b>Note</b>	<b>2017</b>	<b>Restated 2016</b>
<b>Net cash generated from operating activities</b>	17	<u>3,220,588</u>	<u>3,538,765</u>
<b>Cash flow from investing activities</b>			
Purchase of property, plant and equipment	4	<u>(1,044,218)</u>	<u>(3,074,292)</u>
<b>Net cash used in investing activities</b>		<b><u>(1,044,218)</u></b>	<b><u>(3,074,292)</u></b>
<b>Cash flow from financing activities</b>			
Payment of medium-term loan		<u>(742,560)</u>	<u>(315,922)</u>
<b>Net cash used in financing activities</b>		<b><u>(742,560)</u></b>	<b><u>(315,922)</u></b>
<b>Net increase in cash &amp; cash equivalents</b>		<u>1,433,810</u>	<u>148,551</u>
<b>Cash and cash equivalents:</b>			
At the beginning of the year		55,182	<u>(93,369)</u>
At the end of the year	7.2	<b><u>1,488,992</u></b>	<b><u>55,182</u></b>

*The accompanying notes on pages 14 – 29 form an integral part of these financial statements.*

## **ENERGY COMMISSION FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**

### **Notes to the Financial Statements**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

#### **1. Reporting entity**

The Energy Commission (Commission) is a statutory body corporate domiciled in Ghana with perpetual succession and a common seal established by the Energy Commission Act 1997 (Act 541). The Commission is required by law to regulate and manage the development and utilization of energy resources in Ghana as well as to provide the legal, regulatory and supervisory framework for all providers of energy in the country, specifically by granting licenses for transmission, wholesale, supply, distribution and sale of electricity and natural gas and related matter.

The address of the Commission's principal place of business is Ghana Airways Avenue, Behind Alliance Français, Airport Residential Area, GA-037-3212.

#### **Object and function of the Commission**

The object of the Commission is to regulate and manage the utilisation of energy resources in Ghana and co-ordinate policies in relation to them.

The Commission shall;

- Recommend national policies for the development and utilisation of indigenous energy resources;
- Advise the Minister on national policies for the efficient, economical, and safe supply of electricity, natural gas, and petroleum products having due regard to the national economy;
- prepare, review and update periodically indicative national plans to ensure that all reasonable demands for energy are met;
- secure a comprehensive data base for national decision making on the extent of development and utilization of energy resources available to the nation;
- receive and assess applications, and grant licenses under this Act to public utilities for the transmission, wholesale supply, distribution, and sale of electricity and natural gas;
- establish and enforce, in consultation with the Public Utilities Regulatory Commission, standards of performance for public utilities engaged in the transmission, wholesale supply, distribution and sale of electricity and natural gas;
- promote and ensure uniform rules of practice for the transmission, wholesale supply, distribution and sale of electricity and natural gas;
- receive and assess applications, and grant licenses under this Act for the refining, storage, bulk transportation, marketing and sale of petroleum products;
- establish and enforce standards of performance for bodies engaged in the supply, marketing, and sale of petroleum products;
- promote competition in the supply, marketing and sale of petroleum products;
- maintain a register of public utilities, petroleum product marketing companies, retail stations and reseller outlets licensed under this Act in the country;
- pursue and ensure strict compliance with this Act and regulations made under this Act; and
- Perform any other function assigned to it under this Act or any other enactment.

#### **2. Purpose and distribution of the financial statements**

The financial statements have been prepared to provide financial information to the Energy Commission and the Auditor-General. As a result, the financial statements may not be suitable for any other purpose.

**ENERGY COMMISSION  
FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017****Notes to the Financial Statements (Continued)**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

**3. Basis of preparation and summary of significant accounting policies****3.1 Statement of compliance and presentation of financial statements**

The financial statements of Energy Commission for the year ended 31 December, 2017 have been prepared in accordance with Generally Accepted Accounting Principles (GAAP) and in the manner required by the Energy Commission Act, 1997 (Act 541).

**3.2 Basis of measurement and accounting**

The measurement basis applied is the historical cost basis.

**3.3 Significant judgments and sources of estimation uncertainty.**

In preparing these financial statements in conformity with best practices, management makes judgments, estimates and assumptions that affect the application of policies and report amount of assets, liabilities, income and expenses. It also requires the use of accounting estimates and assumptions that may affect disclosure in the financial statements. The estimates and associated assumptions are based on historical experience and various factors that are believed to be reasonable under circumstances, the results of which form the basis of making the judgment about carrying value of assets and liabilities that are not readily apparent from other sources. The actual results could, by definition therefore, often differ from the related accounting estimates.

Estimates and underlying assumptions are reviewed on an on-going basis.

Certain accounting policies have been identified (where management has higher degree of judgment) that have a significant effect on the amounts recognised in the financial statements. Also, certain accounting policies are also identified that are estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year.

**3.3.1 Estimates of assets economic useful life taking into account residual values**

Property, plant and equipment are depreciated over its useful life taking into account residual values, where appropriate. The actual economic useful lives of the assets and residual values are assessed at each financial year-end and may vary depending on a number of factors. In re-assessing asset lives, factors such as technological innovation, life cycles and maintenance programs are taken into account.

**3.4 Foreign currency translation****(i) Functional and presentation currency**

Items included in the financial statements are measured using the currency of primary economic environment in which the entity operates ('the functional currency') Ghana Cedis. Except where otherwise indicated, the financial statements are presented in Ghana Cedis, and rounded to the nearest cedi.

## **ENERGY COMMISSION FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**

### **Notes to the Financial Statements (Continued)**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

#### **3.4 Foreign currency translation (Continued)**

##### **(ii) Transactions and balances**

Transactions denominated in the foreign currencies are recorded in the functional currency using the exchange rates prevailing at the date of the transactions. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency rate of exchange ruling at the reporting date. Foreign exchange gains and losses resulting from the settlement of foreign currencies are recognised in the statement of financial performance.

#### **3.5 Revenue recognition**

Revenue is recognized when the economic benefit flows to the Commission and the revenue can be reliably measured. The following specific recognition criteria apply in revenue recognition.

##### **3.5.1 Government grants and donor support.**

Grants from the government and donor support are recognised at their fair value when the grant or support is received and the Commission complies with all attached conditions.

##### **3.5.2 Transfer from the Energy Fund Regulatory levy**

Revenue from funds transferred from the Energy Fund Regulatory levy to the Commission to cater for expenses are recognized when the transfer is received.

#### **3.6 Cash and equivalents**

Cash and cash equivalents comprise cash balances and call deposits with original maturities of three months or less.

#### **3.7 Employee benefits**

##### **3.7.1 Short term employment benefits**

Short-term employee benefits are amounts payable to employees that fall due wholly within twelve months after the end of the period in which the employee renders the related service. The cost of short-term employee benefits are recognised as an expense in the period when the economic benefit is given, as an employment cost. Unpaid short-term employee benefits as at the end of the accounting period are recognised as an accrued expenses and any short-term benefit paid in advance are recognised as prepayment to the extent that it will lead to a future cash refund or a reduction in future cash payments.

**ENERGY COMMISSION  
FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017****Notes to the Financial Statements (Continued)**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

**3.7.2 Social Security and National Insurance Trust (SSNIT)**

The Commission contributes towards two defined contribution plans in compliance with The National Pensions Act (Act 766) as amended. The Company is required to make a monthly contribution of 13% of employees' basic salaries, whilst the employee makes a contribution of 5.5%, making a total of 18.5% of workers basic salaries. Out of the total 18.5%, 13.5% is paid to Social Security and National Insurance Trust (SSNIT) which manages it. However, the second-tier is also mandatory and it is composed of 5% of basic salaries of employees which is paid to a fund manager who manages it.

The Commission's obligation is limited to the relevant contributions, which are settled on due dates. The pension liabilities and obligations, however, rest with SSNIT and the fund manager.

**3.7.3 Provident fund**

Energy Commission contributes 5% of its employees' basic salary to the provident fund, to serve as an additional payment for staff upon retirement or resignation. The employees also contribute 5% of their basic salaries to the fund. The employer contributions are charged to the statement of financial performance as part of staff cost.

**3.7.4 End of service benefits (ESBs)**

The Commission had two streams of ESBs (i.e. Long Service Awards and Exit Package for retiring officers). Due to financial sustainability issues, the Commission has dropped the long service award and maintained the 'exit package' to its retiring staff. This expenditure is budgeted for under HR & Admin Division budget in the Commission's work program.

**3.8 Inventories**

Inventories are measured at the lower of cost or net realisable value.

The cost of inventories is based on the weighted average cost principle, and includes expenditure incurred in acquiring the inventories, production or conversion costs and other costs incurred in bringing them to their existing location and condition.

Net realisable value is the estimated selling price in the ordinary course of business, less estimated selling expenses.

Inventory reported consists primarily of office supplies such as toners, paper and cleaning items.

**3.9 Property, plant and equipment**

The cost of an item of property, plant and equipment is recognised as an asset when it is probable that future economic benefits associated with the item will flow to the Commission; and the cost of the item can be measured reliably in monetary terms. Property, plant and equipment are initially measured at cost.

Costs include cost incurred initially to acquire or construct an item or property, plant and equipment and cost incurred subsequently to add to, replace part of, or service it. If a replacement cost is recognised in the carrying amount of item of property, plant and equipment, the carrying amount of the replace part is derecognized.

**ENERGY COMMISSION  
FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**

**Notes to the Financial Statements (Continued)**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

**Depreciation**

Property, plant and equipment are depreciated on the straight-line basis over their expected economic useful lives to their estimated residual value (if any).

The useful lives of item of property, plant and equipment have been assessed for both prior and current years as follows:

<b>Class of Assets</b>	<b>Annual depreciation (%)</b>
Office furniture and fittings	12.5
Motor Vehicle	25
Land and Building	2
Computer and accessories	33.33
Plant, machinery & equipment	20

The residual value, useful life and depreciation method of each asset is reviewed at the end of each reporting year. If the expectations differ from the previous estimates, the change is accounted for as a change in accounting estimate with the effect of any change in estimate accounted on a prospective basis.

The depreciation charge for each period is recognised in the statement of financial performance.

The gain or loss arising from derecognition of an item of property, plant and equipment is determined as the difference between the net disposal proceeds, if any, and the carrying amount of the item. The gain or loss arising from derecognition of an item of property, plant and equipment is included in the statement of financial performance when the item is derecognized.

Property, plant and equipment is subsequently measured at cost less accumulated depreciation and any accumulated impairment losses.

**3.10 Trade and other accounts receivables**

Trade receivables are measured at initial recognition at fair value, and are subsequently measured at amortized cost using the effective interest method.

**3.11 Trade and other accounts payables**

Trade payables are initially measured at fair value, and subsequently measured at amortised cost, using the effective interest method.

**3.12 Bank overdraft and borrowings**

Bank overdraft and borrowings are initially measured at fair value, and subsequently measured at amortized cost, using the effective interest method.

**ENERGY COMMISSION  
FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**

**Notes to the Financial Statements (Continued)**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

**4a. Property, plant and equipment**

<b>Cost</b>	<b>1 January</b>	<b>Additions</b>	<b>Disposals</b>	<b>31 December</b>
Land and building	7,290,370	423,000	-	7,713,370
Motor vehicle	3,722,353	131,900	-	3,854,253
Plant & machinery	294,223	-	-	294,223
Furniture and fittings & equip	562,931	71,805	-	634,736
Computers and accessories	<u>747,524</u>	<u>417,513</u>	<u>-</u>	<u>1,165,037</u>
	<b><u>12,617,401</u></b>	<b><u>1,044,218</u></b>	<b><u>-</u></b>	<b><u>13,661,619</u></b>

<b>Accumulated depreciation</b>	<b>1 January</b>	<b>Charge for the year</b>	<b>Disposal</b>	<b>31 December</b>
Land and building	399,861	145,807	-	545,668
Motor vehicle	2,227,603	465,151	-	2,692,754
Plant & machinery	147,094	58,845	-	205,939
Furniture and fittings & equip	441,022	79,925	-	520,947
Computers and accessories	<u>720,667</u>	<u>21,498</u>	<u>-</u>	<u>742,165</u>
	<b><u>3,936,247</u></b>	<b><u>771,226</u></b>	<b><u>-</u></b>	<b><u>4,707,473</u></b>

**Carrying amount**

At 31 December, 2017	<b><u>8,954,146</u></b>
At 31 December, 2016	<b><u>8,681,154</u></b>



**ENERGY COMMISSION  
FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**

**Notes to the Financial Statements (Continued)**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

**4b. Property, plant and equipment (cont'd)**

<b>Cost</b>	<b>1 January</b>	<b>Additions</b>	<b>Disposal</b>	<b>31 December</b>
Land and building	6,351,370	939,000	-	7,290,370
Motor vehicle	1,729,353	1,993,000	-	3,722,353
Plant & machinery	252,873	41,350	-	294,223
Furniture and fittings & equip	502,272	60,659	-	562,931
Computers and accessories	<u>707,241</u>	<u>40,283</u>	<u>-</u>	<u>747,524</u>
	<b><u>9,543,109</u></b>	<b><u>3,074,292</u></b>	<b><u>-</u></b>	<b><u>12,617,401</u></b>

<b>Accumulated depreciation</b>	<b>1 January</b>	<b>Charge for the year</b>	<b>Disposal</b>	<b>31 December</b>
Land and building	254,054	145,807	-	399,861
Motor vehicle	1,725,052	502,551	-	2,227,603
Plant & machinery	88,249	58,845	-	147,094
Furniture and fittings & equip	370,655	70,367	-	441,022
Computers and accessories	<u>582,372</u>	<u>138,295</u>	<u>-</u>	<u>720,667</u>
	<b><u>3,020,382</u></b>	<b><u>915,865</u></b>	<b><u>-</u></b>	<b><u>3,936,247</u></b>

**Carrying amount**

At 31 December, 2016	<b><u>8,681,154</u></b>
At 31 December, 2015	<b><u>6,522,727</u></b>

**ENERGY COMMISSION  
FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**

**Notes to the Financial Statements (Continued)**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

<b>5. Inventory</b>	<b>2017</b>	<b>2016</b>
Consumables	<u><b>128,118</b></u>	<u><b>21,066</b></u>

<b>6. Trade and other accounts receivables</b>	<b>2017</b>	<b>Restated 2016</b>
Trade receivables	18,311,061	15,439,277
Staff loan	188,622	288,622
Prepayment (grounds rent, Vehicle & Building Insurance)	58,000	142,000
Sundry debtors	-	20,117
Others	393,348	-
	<u><b>18,951,031</b></u>	<u><b>15,890,016</b></u>

**7. Cash and cash equivalents**

**7.1 Cash and bank balance**

	<b>2017</b>	<b>2016</b>
Cash on hand (Petty Cash)	83	633
Cash at banks	<u>1,488,909</u>	<u>54,549</u>
	<u><b>1,488,992</b></u>	<u><b>55,182</b></u>

**7.2 Cash and cash equivalents for the purpose of cash flow include:**

	<b>2017</b>	<b>2016</b>
Cash and bank balance	<u><b>1,488,992</b></u>	<u><b>55,182</b></u>

**ENERGY COMMISSION  
FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**

**Notes to the Financial Statements (Continued)**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

<b>8. Trade and other accounts payables</b>	<b>2017</b>	<b>2016</b>
Trade payables	4,259,142	3,837,810
Audit fees	344,000	203,575
Accrued liabilities	711,162	211,466
	<b><u>5,314,304</u></b>	<b><u>4,252,851</u></b>

<b>9. Medium term loan</b>	<b>2017</b>	<b>2016</b>
Unibank	<u>-</u>	<b><u>74,560</u></b>

This represents a medium-term loan obtained from Unibank Limited for the completion of the office building. It is a five-year loan at a fixed interest rate of (33+-2) % calculated on a reducing balance basis, which is secured by a mortgage of office building of the Commission. This Loan was extinguished through repayment as at 31 December 2017

**10. Capital grant**

This is made up of transfer from the Energy Fund to finance capital expenditure of the Commission.

	<b>2017</b>	<b>2016</b>
Balance at 1st January	2,415,315	2,415,315
Reclassification to Accumulated Fund	<u>(2,415,315)</u>	<u>-</u>
	<b><u>-</u></b>	<b><u>2,415,315</u></b>

During the year, management of the Energy Commission reviewed its accounting policy with respect to financial reporting on transfers from the Energy Fund to finance capital expenditure of the Energy Commission. Management has assessed that receipts budgeted for capital expenditure that it receives from the Energy Fund do not represent Capital grants. Consequently, the Energy Commission has determined that the transfers are more accurately reported as income for the period in which it receives those funds. Accordingly amounts accumulated in the Capital Grant reserves in respect of prior year receipts have been transferred/reclassified to the Accumulated Fund in equity in the current year.

**ENERGY COMMISSION  
FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**
**Notes to the Financial Statements (Continued)**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

**11. Special fund account**

In accordance with section 44 (2) of the Energy Commission Act, 1997(Act 541), a special fund has been set up with transfers from the Energy Fund account in order to create an investment account that will generate additional income to support the operations of the Commission.

In 2017, the Energy Commission reviewed its financial reporting policy with respect to the Special fund account and determined that in order to more accurately reflect and report on resources that are set aside for investments, there should be a separate cash/investment account capturing all such activity. Therefore in 2017 a separate account has been set up which is currently reported as part of cash and cash equivalents. The balances in the Special fund column of the Statement of Changes in Equity are therefore re-classified to the Accumulated Fund in equity in the current year.

	<b>2017</b>	<b>2016</b>
Balance at 1st January	488,330	488,330
Reclassification to Accumulated Fund	<u>(488,330)</u>	<u>-</u>
	<u><u>-</u></u>	<u><u>488,330</u></u>

	<b>2017</b>	<b>Restated 2016</b>
<b>12. Revenue</b>		
Subvention from Government of Ghana	48,768	-
Transfers from Energy Fund	35,994,987	31,216,974
Transfers from regulatory levy account	<u>3,165,224</u>	<u>3,165,225</u>
	<u><b>39,208,979</b></u>	<u><b>34,382,199</b></u>

	<b>2017</b>	<b>2016</b>
<b>13. Other revenue</b>		
Other revenue	<u>670,089</u>	<u>1,020,408</u>
	<u><b>670,089</b></u>	<u><b>1,020,408</b></u>

Other revenues consist primarily of payment from participants and sponsors participating in and/or attending Energy Fairs during the year.

	<b>2017</b>	<b>2016</b>
<b>14. Personnel emoluments</b>		
Salaries and wages	10,387,969	8,825,053
Employer SSNIT contribution	1,212,499	839,574
Employer provident fund contribution	<u>655,405</u>	<u>347,199</u>
	<u><b>12,255,873</b></u>	<u><b>10,011,826</b></u>

**ENERGY COMMISSION  
FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**

**Notes to the Financial Statements (Continued)**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

<b>15. General and administrative expenses</b>	<b>2017</b>	<b>2016</b>
Board expenses	528,153	891,326
Stationery and printing	25,593	215,018
Insurance	117,336	105,356
Audit fees	344,000	299,875
Audit related expenses	126,572	141,000
Communication	263,202	75,016
Sanitation and security	199,278	39,308
Repairs and maintenance	933,723	750,872
Medicals	387,467	137,395
Office consumables	8,416	82,932
Office rent	17,553	-
Motor vehicle running	383,237	363,950
Travel	6,509	-
Advertising	100,462	120,019
Depreciation	771,226	915,865
Bank charges	10,536	8,536
Interest on medium-term loan	1,273,922	284,078
Fuel and lubricants	237,055	529,372
Grounds rent	56,000	56,000
Utilities	334,117	354,406
Refreshment	23,072	37,945
Professional fees	<u>14,555</u>	<u>15,639</u>
	<b><u>6,161,984</u></b>	<b><u>5,423,908</u></b>

**ENERGY COMMISSION  
FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**

**Notes to the Financial Statements (Continued)**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

<b>16. Service activities expenses</b>	<b>2017</b>	<b>2016</b>
Renewable energy	4,791,367	2,925,140
Energy efficiency and climate change	3,675,037	2,975,075
Operational & technical regulation	783,445	1,195,340
Strategic planning and policy	128,289	374,606
Public affairs	336,284	128,345
Staff development	2,801,206	3,460,251
Procurement	261,181	307,827
Financial review and audit	773,766	428,505
Social impact, environmental and technical assistance	123,714	81,541
Inspectorate	323,699	289,620
Inter-institutional support/donation	822,292	492,803
International Co-operation and affiliations	<u>2,088,890</u>	<u>3,574,515</u>
	<b><u>16,909,170</u></b>	<b><u>16,233,568</u></b>
	<b>2017</b>	<b>Restated 2016</b>
<b>17. Cash (used in) / generated from operations</b>		
<b>Cashflows from operations</b>		
Excess of expenditure over income	4,552,041	3,733,306
Depreciation	<u>771,226</u>	<u>915,865</u>
	5,323,267	4,649,171
<b>Changes in working capital</b>		
Increase in inventory	(103,117)	(3,297)
Increase in trade and other accounts receivables	(3,061,015)	(2,459,271)
Increase in trade and other accounts payables	<u>1,061,453</u>	<u>1,352,163</u>
<b>Net cash generated from operations</b>	<b><u>3,220,588</u></b>	<b><u>3,538,765</u></b>

## **ENERGY COMMISSION FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**

### **Notes to the Financial Statements (Continued)**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

#### **18 Financial risk management**

##### **18.1 Financial risk factors**

The Commission's activities are exposed to variety of financial risk: market risk (including currency risk, fair value interest rate and price risk), credit risk and liquidity risk. The Commission's overall risk management program focuses on the unpredictability of financial market and seeks to minimize potential adverse effect on the Commission's financial performance. Risk management is carried out in compliance with the Commission policies approved by the Board of Directors.

All of the financial instruments are denominated in Ghana cedis. As a result, there is no exposure to foreign currency risk.

##### **18.1.1 Credit risk**

Credit risk is the risk of suffering financial loss should any of the Commission's counterparties fail to fulfil the contractual obligation. The financial instruments which potentially subject the Commission to concentration of credit risk is primarily cash at bank and trade and other accounts receivables.

The Commission deals with financial institutions licensed by the Bank of Ghana as well as the Bank of Ghana itself. The risk of the counterparty failing to fulfil their contractual obligations is assessed to be minimal. The Commission does not hold collateral securities.

With respect to trade and other accounts receivables, the Commission undertakes a rigorous screening process for all customers prior to providing them their initial license. As some of the Commission's significant customers are government institutions, in the event of debts being long outstanding, round table meetings are held between the heads of these institutions and select members of the Commission's governing board to resolve overdue payment issues. The Auditor General requires that all overdue debts be treated in accordance with the provisions of Section 53 of the Public Financial Management Act, 2016 (Act 921). This requires that for overdue debts the sector Minister as well as the Minister of Finance have to participate in any decision to write off any overdue debts.

##### **18.1.2 Interest rate risk**

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Commission's exposure to interest rate risk was as a result of its medium term loan that it entered into. The Commission did not have a policy to mitigate this risk. However, the medium term loan was extinguished as at the current year reporting date and therefore this risk no longer exists for the Commission.

##### **18.1.3 Liquidity risk**

Liquidity risk is the risk that the Commission will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivery of cash or other financial assets. The Commission's approach to managing liquidity is to ensure, as far as possible, that it will have sufficient liquidity (cash reserves) to meet its liabilities when they are due.

**ENERGY COMMISSION**  
**FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**

**Notes to the Financial Statements (Continued)**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

**18.1.3 Liquidity risk (cont'd)**

**31 December, 2017**

<b>Contractual maturities of financial liabilities</b>	<b>Less than 3 months</b>	<b>Over 3 months</b>
Trade payables	4,259,142	-
Audit fees	344,000	-
Accrued liabilities	711,162	-

**31 December, 2016**

<b>Contractual maturities of financial liabilities</b>	<b>Less than 3 months</b>	<b>Over 3 months</b>
Trade payables	3,837,810	-
Audit fees	203,575	-
Accrued liabilities	211,466	-

**19. Related party transactions**

**(a) Transactions with Directors and key management personnel**

Key management personnel are defined as those persons having authority and responsibility for planning, directing and controlling the activities of the Commission (directly or indirectly) and comprise the Directors and Senior Management of the Commission.

There were no material transactions with the Commission in which a Director or other members of key management personnel (or any connected person) were related.

**(b) Remuneration of Governing Board and other key management personnel**

Remuneration to the Governing Board comprising sitting allowances during the year amounted to GHS 189,508 (2016: GHS 597,255).



## ENERGY COMMISSION FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017

### Notes to the Financial Statements (Continued)

*(All amounts are stated in Ghana cedi unless otherwise stated)*

#### 20. Correction of prior period error

##### *Trade and other accounts receivables*

Transfers from the Energy fund and the regulatory levy are recognized when the transfer is received by the Commission. This means that revenues are recognised only when received and therefore revenues are not accrued. For the year 2016 revenue was recorded for transfers from the Energy Fund related to payments for personnel emoluments. Since there had been no transfer of funds an accrual was recorded which was in contravention of the Commission's policy on revenue recognition. The accrual was reported as "Other" in the Trade and other accounts receivables caption.

As this error was made in the prior period, the comparative column in the financial statements was restated as follows;

- The comparative 2016 column of "Revenues" in the Statement of Financial performance and "Transfers from Energy Fund" in note 12 to the financial statements was reduced by GHS 3,912,840 to reflect the correction.
- The comparative 2016 column of "Trade and other accounts receivables" caption in the Statement of Financial Position was reduced by GHS 3,912,840 to also reflect this correction.
- The corresponding note on this in Note 6 (captioned "Others") under the 2016 comparative column was reduced by GHS 3,912,840 to reflect this correction.

During the year, it was realised that the trade receivables balance for the prior year was overstated by GHS 876,314. The sub-ledger listing of customers that made up the trade receivables amount was less than the amount recorded in the ledger by the above amount. In addition, it was realised that the sundry debtors balance for the prior year was overstated by GHS 2,164. These errors were corrected by restating the prior period financial statements as follows;

- The comparative 2016 column of "Revenues" in the Statement of Financial performance and "Transfers from Energy Fund" in note 12 to the financial statements was reduced by GHS 878,478 to reflect these corrections.
- The comparative 2016 column of "Trade and other accounts receivables" caption in the Statement of Financial Position was reduced by GHS 878,478 to also reflect these corrections.
- The "Trade receivables" caption under the 2016 comparative column of Note 6 (Trade and other accounts receivables) was reduced by GHS 876,314 to reflect one correction.
- The "Sundry debtors" caption under the 2016 comparative column of Note 6 (Trade and other accounts receivables) was reduced by GHS 2,164 to reflect one correction.

**ENERGY COMMISSION  
FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER, 2017**

**Notes to the Financial Statements (Continued)**

*(All amounts are stated in Ghana cedi unless otherwise stated)*

**20. Correction of prior period error (cont'd)**

**i. Statement of financial position**

	Impact of correction of error		
	As previously reported	Adjustments	As restated
<b>Assets</b>			
Trade and other accounts receivables	20,681,334	(4,791,318)	15,890,016
Other assets	8,761,337	-	8,761,337
<b>Total assets</b>	<b><u>29,442,671</u></b>	<b><u>(4,791,318)</u></b>	<b><u>24,651,353</u></b>
<b>Total equity</b>	<b><u>24,447,260</u></b>	<b><u>(4,791,318)</u></b>	<b><u>19,655,942</u></b>
<b>Total liabilities</b>	<b><u>4,995,411</u></b>	<b><u>-</u></b>	<b><u>4,995,411</u></b>
<b>Total equity and liabilities</b>	<b><u>29,442,671</u></b>	<b><u>(4,791,318)</u></b>	<b><u>24,651,353</u></b>

**ii. Statement of financial performance**

	Impact of correction of error		
	As previously reported	Adjustments	As restated
<b>Income</b>			
Transfers from Energy Fund	36,008,292	(4,791,318)	31,216,974
Other revenues	4,185,633	-	4,185,633
<b>Total income</b>	<b><u>40,193,925</u></b>	<b><u>(4,791,318)</u></b>	<b><u>35,402,607</u></b>
<b>Total expenditures</b>	<b><u>(31,669,302)</u></b>	<b><u>-</u></b>	<b><u>(31,669,302)</u></b>
<b>Excess of income over expenditures</b>	<b><u>8,524,623</u></b>	<b><u>(4,791,318)</u></b>	<b><u>3,733,305</u></b>

**iii. 6. Trade and other accounts receivables**

	Impact of correction of error		
	As previously reported	Adjustments	As restated
Trade receivables	16,315,591	(876,314)	15,439,277
Sundry debtors	22,281	(2,164)	20,117
Others	3,912,840	(3,912,840)	-
Other accounts receivables	430,622	-	430,622
	<b><u>20,681,334</u></b>	<b><u>(4,791,318)</u></b>	<b><u>15,890,016</u></b>

**21. Contingent assets, liabilities and capital commitments**

There were no contingent assets, contingent liabilities or capital commitments as at 31 December, 2017 (2016: Nil)

**22. Events after year end**

Where there are material events that are indicative of conditions that arose after the statement of financial position date, the Commission will disclose them by way of note, the nature of the event and estimate of its financial effect or a statement that such an estimate cannot be made. The Commission had no material subsequent events that required adjustment to or disclosure in the financial statements.



